



UNITED STATES MARINE CORPS  
Marine Corps Base  
Camp Lejeune, North Carolina 28542-5001

IN REPLY REFER TO:  
11000  
PWO

From: Commanding General, Marine Corps Base, Camp Lejeune  
To: Commandant of the Marine Corps (LFF-1)  
Via: (1) Commander, Atlantic Division, Naval Facilities Engineering Command  
Norfolk, VA 23511-6087 (Code 09A21B)  
(2) Commander, Naval Facilities Engineering Command, 200 Stovall St.,  
Alexandria, VA 22332

Subj: FY-88 MILITARY CONSTRUCTION PROJECT P-678, COMBAT VEHICLE MAINTENANCE  
SHOP, MARINE CORPS BASE, CAMP LEJEUNE, NC

Ref: (a) CG MCG CamLej ltr 11000 PWO of 17 Jan 86  
(b) PHONCON btwn Ms. Gale (Code 09A21B) and Mr. Estes (PWO, MCB CLNC)  
on 28 Jan 86

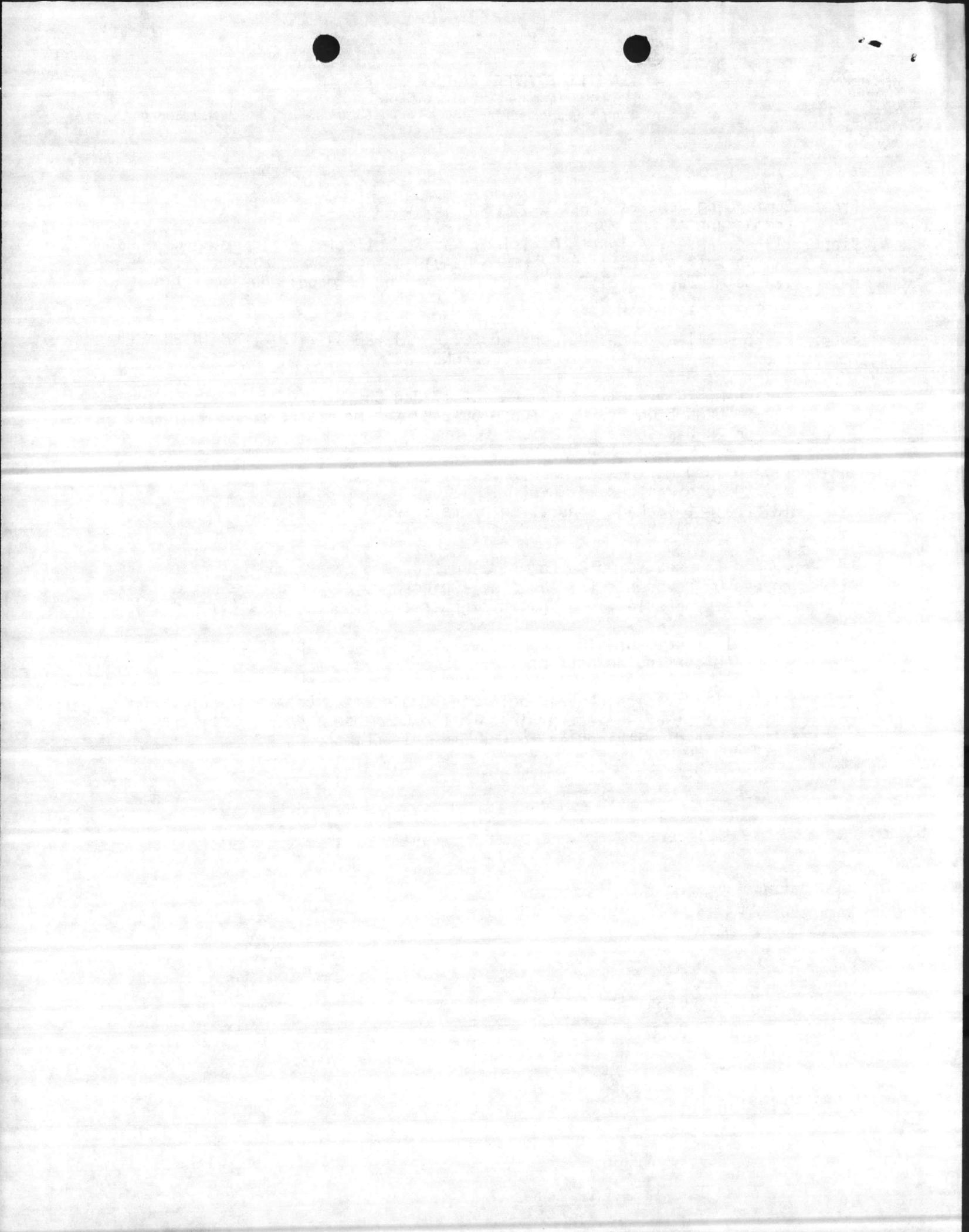
Encl: (1) CO 10th Marines 2d MARDIV ltr 11000 S-4 of 14 Jan 86  
(2) CO 10th Marines 2d MARDIV ltr 11000 S-4 of 28 Jan 86  
(3) Project package consisting of revised DD Form 1391/1391c  
of 31 Jan 86

1. Reference (a) submitted DD Form 1391 dated 15 January 1986 for review. It was agreed by reference (b) that the subject project should be revised and resubmitted to reflect requirements generated by enclosures (1) and (2).
2. Accordingly, enclosure (3) supersedes reference (a) and is submitted for your review and continuing action.
3. The Atlantic Division, Naval Facilities Engineering Command is requested to certify the cost of subject project to the Commander, Naval Facilities Engineering Command, with copies to CMC and this Command.

R. A. TIEBOUT  
By direction

Copy to:  
CMC (LFF-1 (advance)  
NAVFACENGCOM (advance)

Blind copy to:  
FAC  
LOG  
PMO  
MAINT





UNITED STATES MARINE CORPS  
10th Marines, 2d Marine Division, FMF  
Camp Lejeune, North Carolina 28542-5515

*Gene  
Fred Be  
Larry*

IN REPLY REFER TO  
11000  
S-4  
14 Jan 86

From: Commanding Officer, 10th Marines  
To: Commanding General, Marine Corps Base, CLNC (AC/S G-4 Planning)  
Via: Commanding General, 2d Marine Division, FMF (AC/S G-4 Facilities)

Subj: ROLLING STOCK LIST

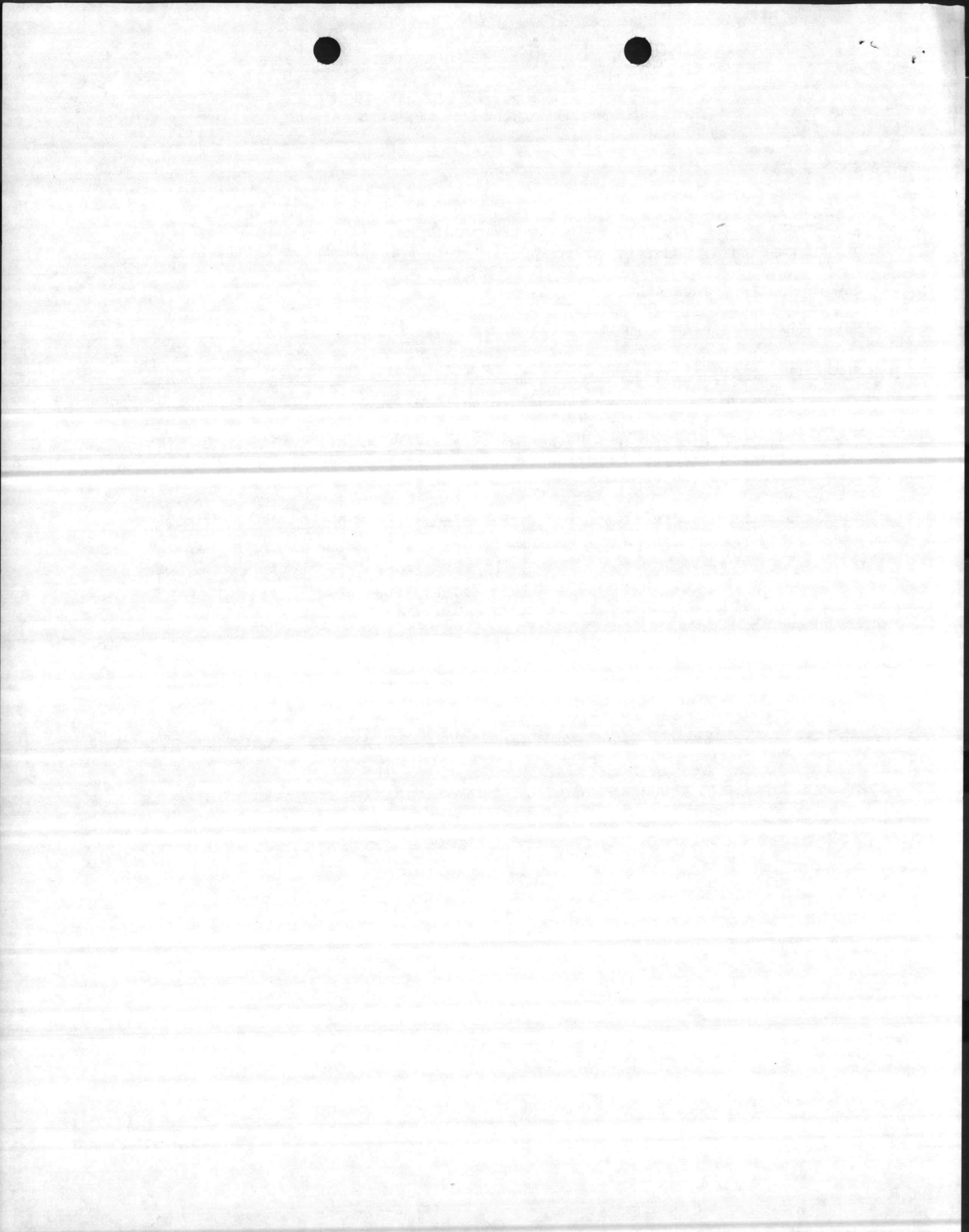
Ref: (a) Phonecon btwn LtCol FISCHER and Mr. ESTES on 13 Jan 1986

Encl: (1) Vehicle/Engineer Support Equipment Maintenance Facility Equipment Listing  
(2) T/O Listing of Personnel to work in Vehicle/Engineer Support Equipment Maintenance Facility  
(3) Vehicle/Ordnance Maintenance Facility (4/10) Equipment Listing  
(4) T/O Listing of Personnel to work in Vehicle/Ordnance Maintenance Facility (4/10)

1. As discussed in reference (a), enclosures (1) through (4) are submitted.

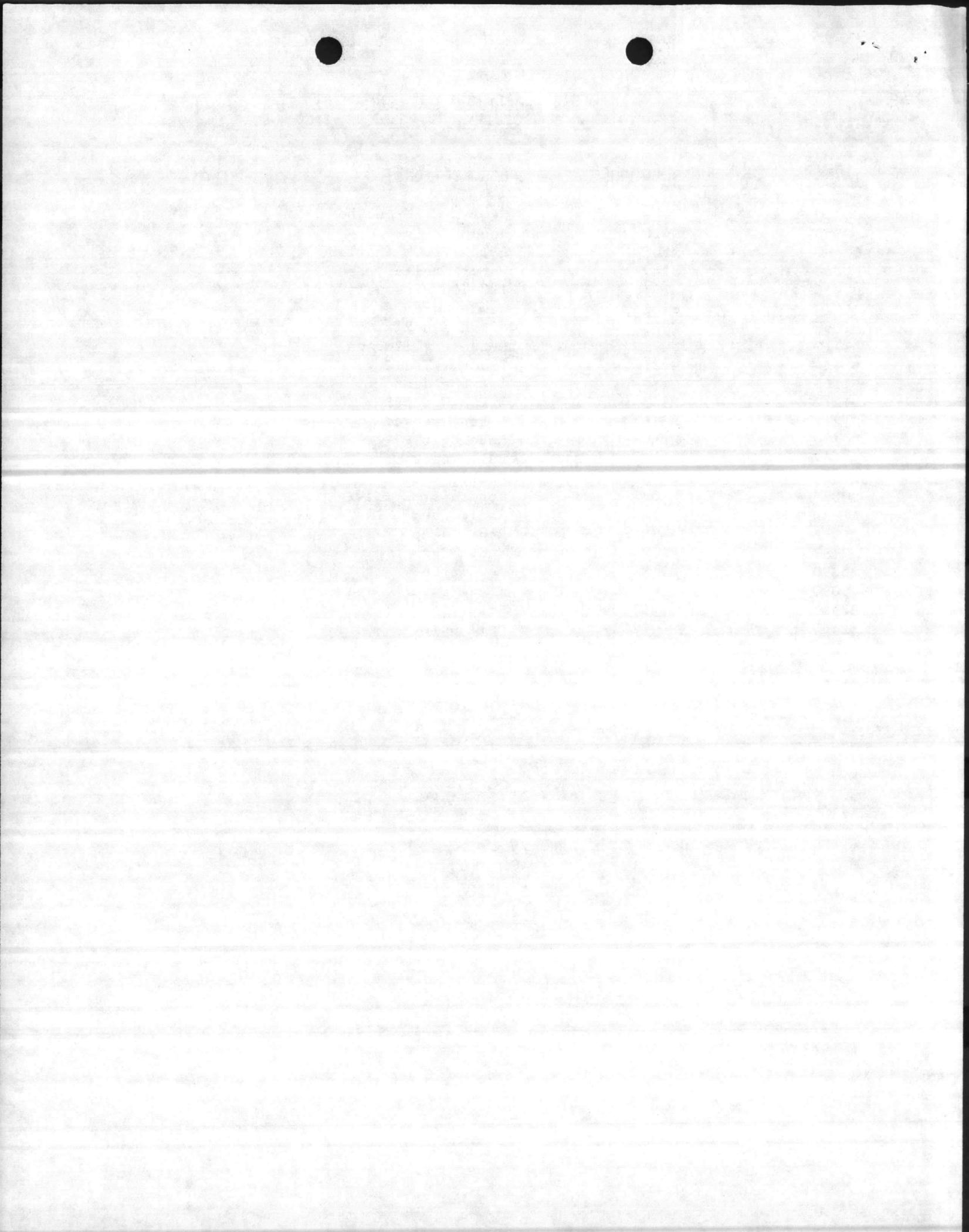
*V. L. Fischer Jr.*

V. L. FISCHER, Jr.  
By direction



VEHICLE/ENGINEER SUPPORT EQUIPMENT  
MAINTENANCE FACILITY EQUIPMENT LISTING

<u>TAMCN</u>	<u>NOMENCLATURE</u>	<u>DESCRIPTION</u>	<u>QTY</u>
D0230	M172	Semi-Trailer Lowbed	3
D0840	M416	Jeep Trailer	22
D0860	M105	5 Ton Truck Trailer	10
D0880	M149	Water Trailer	3
D1016	M1008	1/2 Ton Pickup Truck	4
D1020	M561	Gamma-Goat	4
D1059	M923	5 Ton Truck	40
D1110	M49	Refueler, 1200 gal	3
D1134	M931	Tractor Trailer	3
D1160	M151	1/4 Ton Jeep	23
D1210	M543	5 Ton Wrecker	1
D1212	M816	5 ton Wrecker	2
D0190	HPLU	Lube Unit	2
B2462	D7	Bull Dozer	2
B2565	RT 4000	Forklift	12
D0875	M762	Generator Trailer	52
A1930	AN/MRC 109	Radio Jeep	7
A1935	AN/MRC 138	Radio Jeep	7
A2183	AN/MRC 135	Radio Jeep	14
D0890	M718	Ambulance	1
D0090	JOM-1	Steam Cleaner	1
B2465	RT 10,000	Forklift	1
B2463	MC 1150	Bull Dozer	3
			220



*Veh  
Engineers*

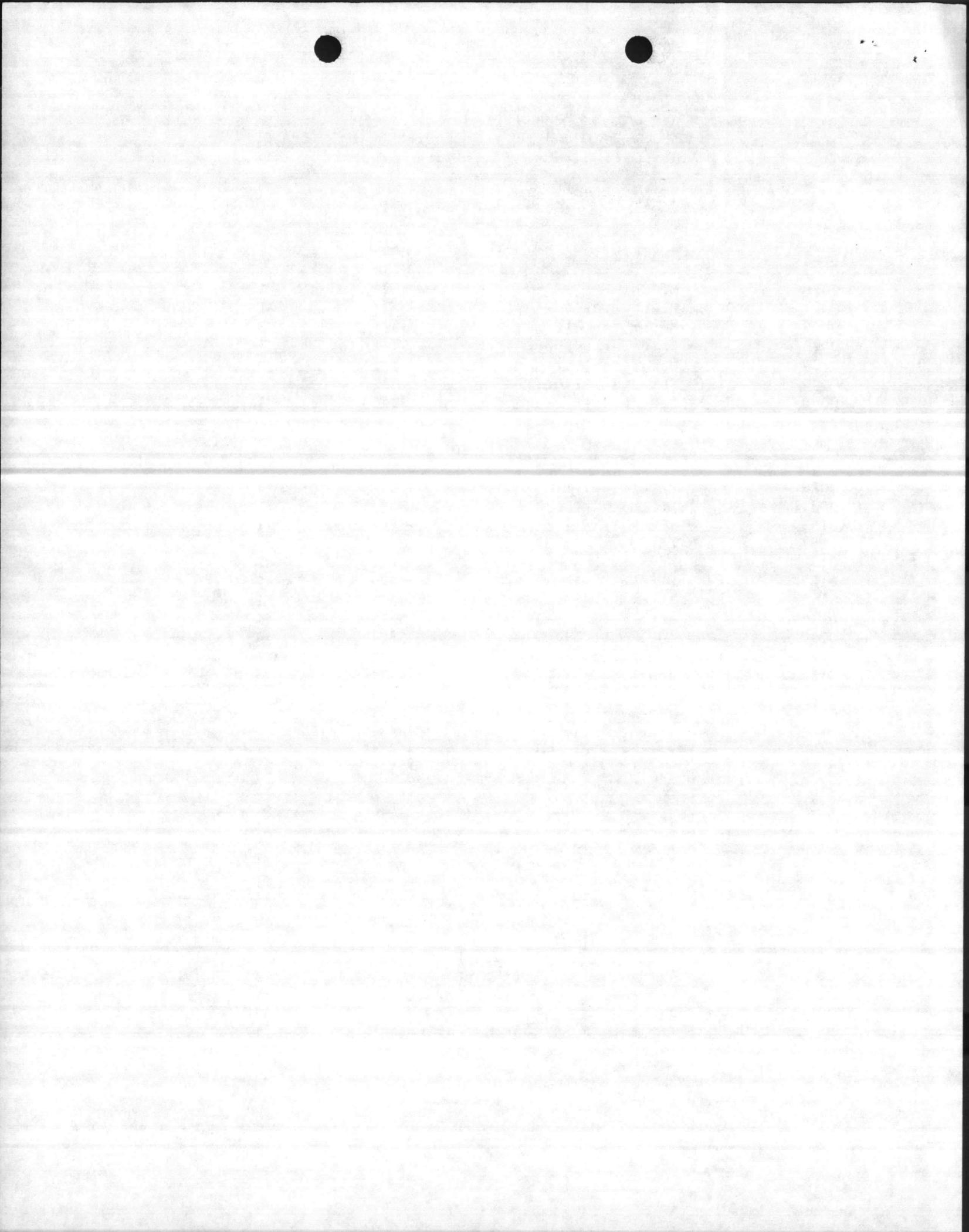
T/O LISTING OF PERSONNEL TO WORK IN  
VEHICLE/ENGINEER SUPPORT EQUIPMENT MAINTENANCE  
FACILITY

TAB

<u>LINE NO.</u>	<u>DESCRIPTION</u>	<u>MOS</u>	<u>QTY</u>
0020	MT Chief	3529	1
0021	Wrecker Driver	3523	1
0022	Motor Vehicle Mech	3521	3
0023	Refueler Driver	3531	1
0024	Motor Vehicle Oper	3531	4
0040	Observer/Driver	0861	1
0046	Pads Driver	0844	1

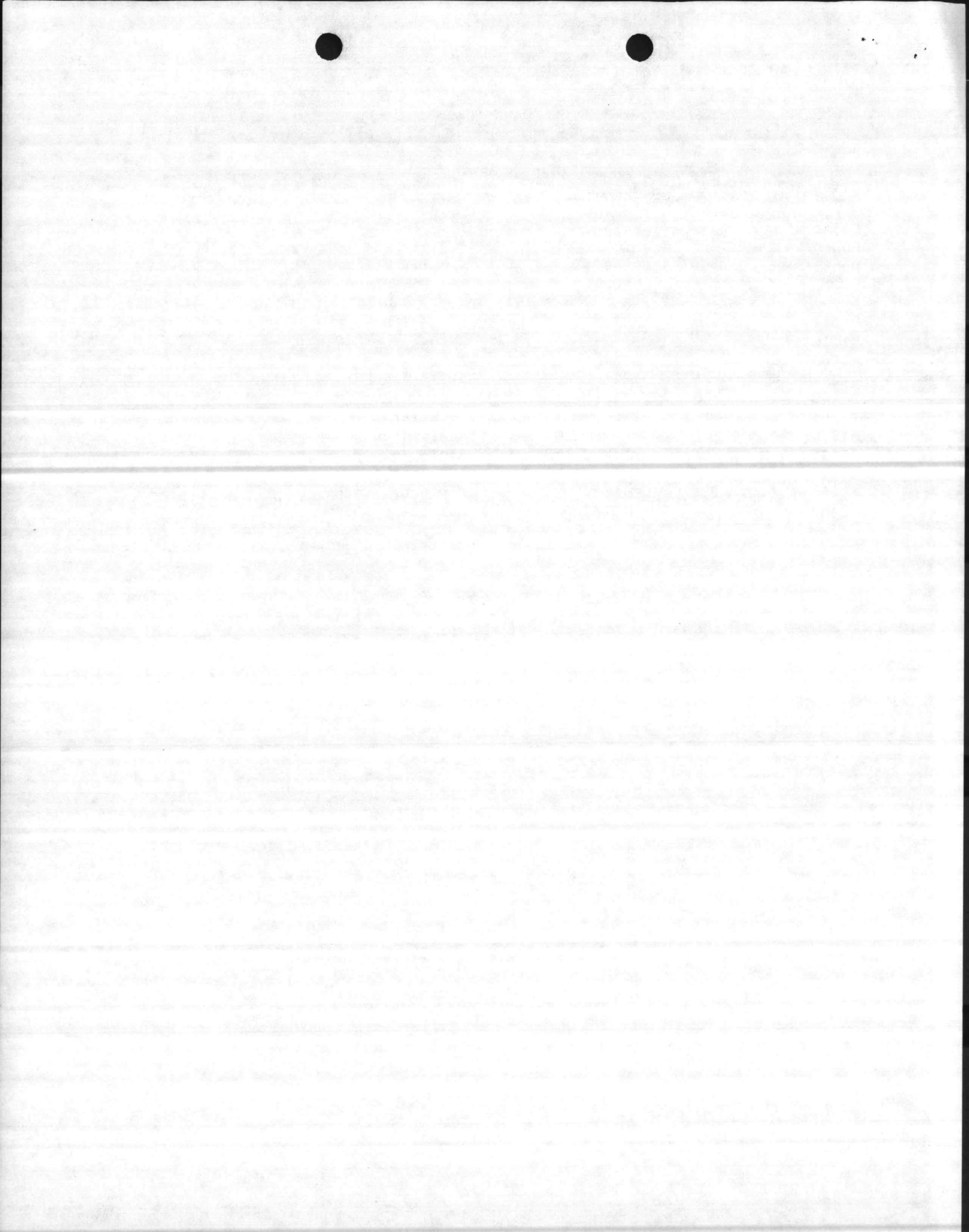
HQ

0029	Mt Officer	3502	1
0031	Mt Chief	3529	1
0153	Truck Master	3537	1
0153A	Log Data clerk	0411	1
0154	Auto Mech	3521	1
0155	Wrecker Driver	3523	1
0155A	Auto Mech	3521	1
0156	Auto Mech	3521	4
0157	Auto Mech	3521	4
0158	Truck Driver	3531	1
0158A	Truck Driver	3531	3
0159	Trac Driver	3533	2
0160	Truck Driver	3531	4
0161	Trac Driver	3533	1
0162	Refueler driver	3531	1
0163	Truck Driver	3531	5
0165	Engineer Officer		1
0166	Engineer Equipment Chief		1
0166A	Log Data Clerk		1
0166B	Elect Repairman		1
0167	Elect Repairman		1
0168	Elect Repairman		1
0169	Elect Repairman		4
0170	Elect Repairman		3
1071	Engineer Maint Chief		1
0172	Engineer Equipment Mech		2
0173	Engineer Equipment Mech		3
0174	Engineer Equipment Operator		1
0175	Engineer Equipment Operator		3
0176	Engineer Equipment Operator		12
	Total Personnel		79



VEHICLE/ORDNANCE MAINTENANCE  
FACILITY (4/10) EQUIPMENT LISTING

<u>TAMCN</u>	<u>NOMENCLATURE</u>	<u>DESCRIPTION</u>	<u>QTY</u>
D0840	M416	Jeep Trailer	25
D0860	M105	5 Ton Truck Trailer	15
D0880	M149	Water Trailer	6
D1016	M1008	1/2 Ton Pickup Truck	5
D1020	M561	Gamma Goat	4
D1059	M923	5 Ton Truck	48
D1110	M49	Refueler, 1200 gal	1
D1160	M151	1/4 Ton Jeep	26
D1212	M816	5 Ton Wrecker	1
D0190	HPLU	Lube Unit	2
B2565	RT 4000	Forklift	6
A1930	AN/MRC 109	Radio Jeep	7
A1935	AN/MRC 138	Radio Jeep	5
D0890	M718	Ambulance	1
E0665	M198	Howitzer, 155mm	<del>24</del> 18
E0640	M101A1	Howitzer, 105mm	4
<b>TOTAL VEHICLES</b>			<u>180</u>



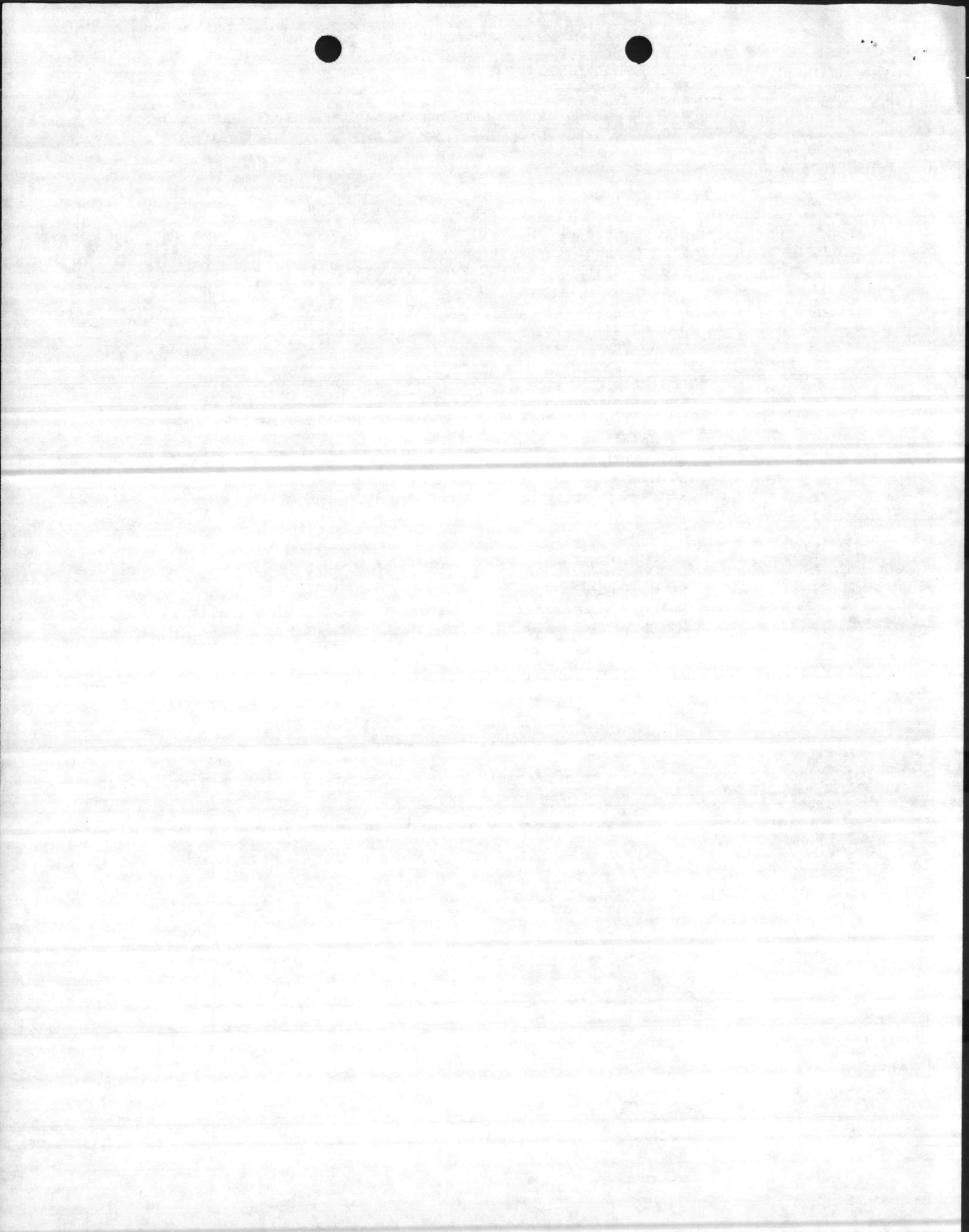
*Veh  
Ordnance*

T/O LISTING OF PERSONNEL TO WORK IN VEHICLE/ORDNANCE  
MAINTENANCE FACILITY (4/10)

<u>LINE NO.</u>	<u>DESCRIPTION</u>	<u>MOS</u>	<u>QTY</u>
35	Fire Controlman/Driver	0844	6
26	Fire Controlman/Driver	0844	2
44	Field Radio Operator/Driver	2531	1
47	Field Radio Operator/Driver	2531	2
52	Ordnance Officer	2120	1
53B	Maint Mgmt Chief	0411	1
53C	Maint Mgmt NCO	0411	1
55	Logistics Man	0431	1
55A	Log Data Clerk	0411	1
56	Logistics Man	0431	1
68	MT Officer	3502	1
69	MT Chief	3529	1
70	Auto Mech	3521	1
71	HV Operator	3531	1
72	Wrecker Operator	3523	1
73	Mechanic	3531	1
74	Mechanic	3531	2
75	Dispatcher	3531	1
76	HV Operator	3531	1
77	HV Operator	3531	1
78	Refueler Operator	3531	1
19	MT Chief	3529	3
24	Truck Driver	3531	15

(Approximate number of personnel who perform howitzer maintenance on a daily basis.)

**Total Personnel**
30  
**77**





UNITED STATES MARINE CORPS  
10th Marines, 2d Marine Division, FMF  
Camp Lejeune, North Carolina 28542-5515

IN REPLY REFER TO  
11000  
S-4  
28 Jan 86

From: Commanding Officer, 10th Marines  
To: Commanding General, Marine Corps Base, CLNC (Facilities)  
Via: Commanding General, 2d Marine Division, FMF (Facilities)

Subj: OVERHEAD COVER FOR HOWITZERS

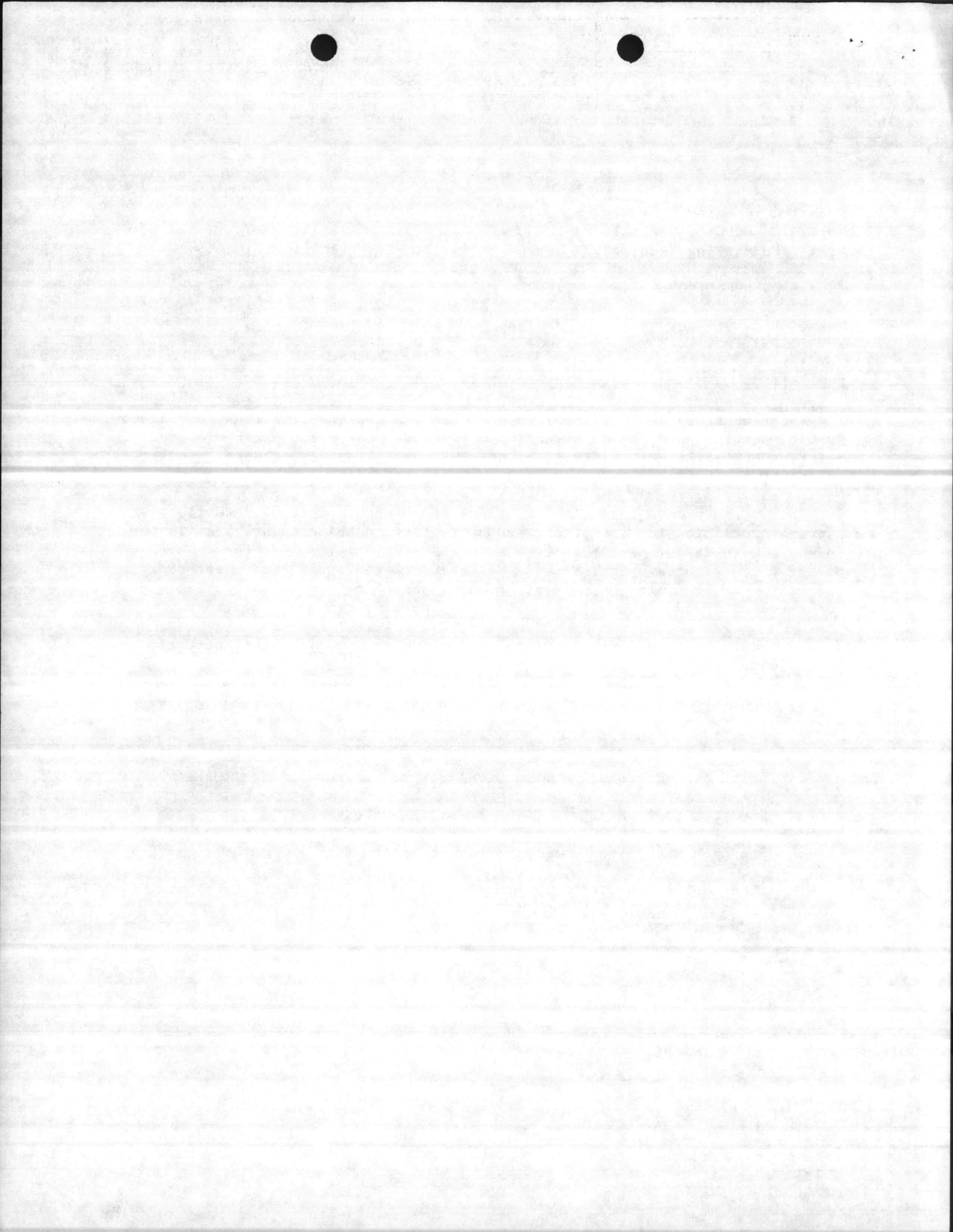
Ref: (a) Project #P-678 predesign conference, <sup>14</sup> Dec 85  
(b) CO, 10th Mar ltr 11000 S-4 of 18 Dec 85

Encl: (1) Sample Overhead Cover Dimensions

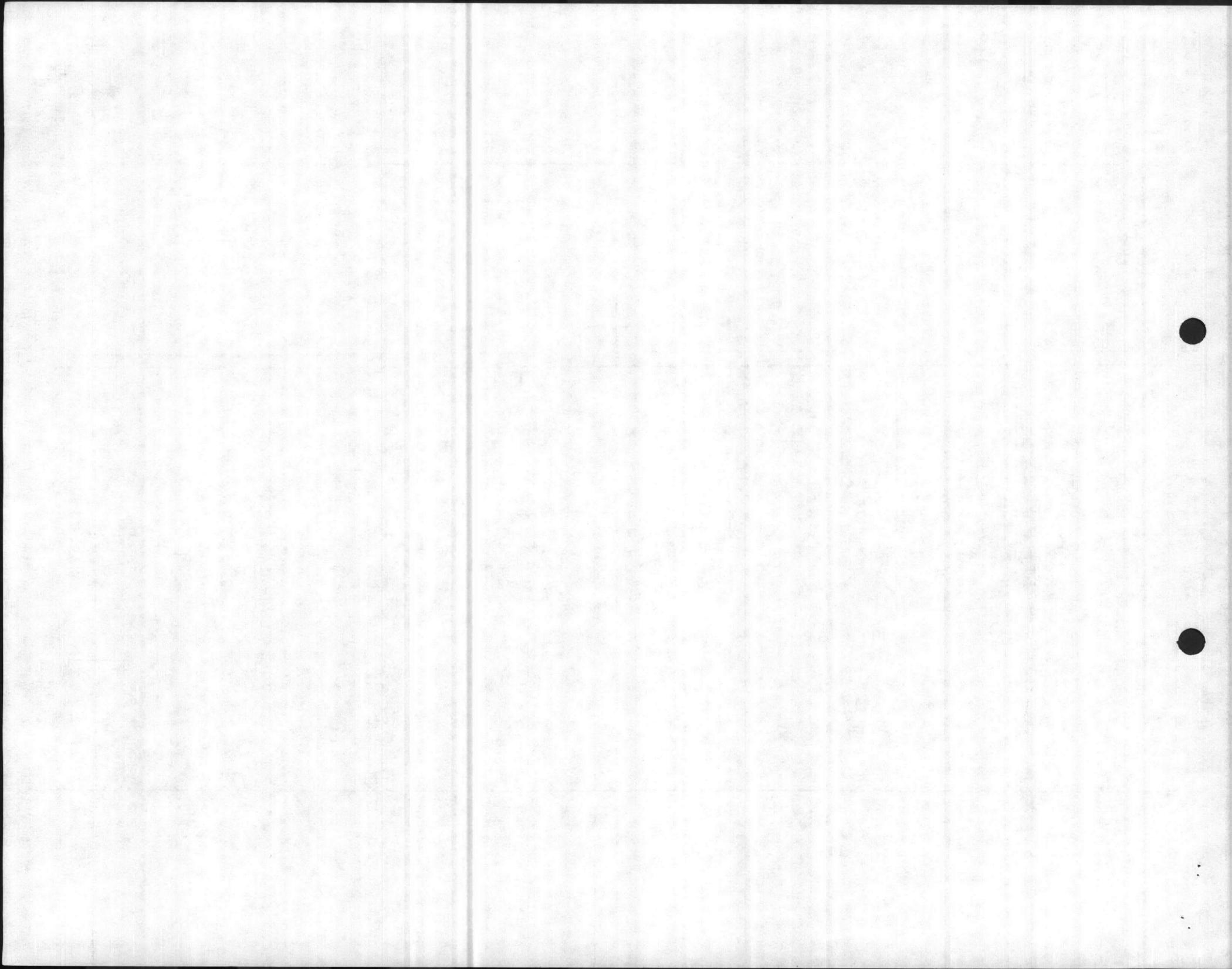
1. References (a) and (b) involved proposed changes/modifications to Project #P-678, and included the construction of overhead cover for our howitzers. The maintenance facility itself will be used primarily for second echelon maintenance and up by the battalion ordnance and vehicle mechanics.
2. The overhead cover, sample dimensions of which are in enclosure (1), will provide protection for crews and weapons as first echelon maintenance is performed almost daily, particularly before and after field operations. Without overhead cover certain activities are either delayed or negated, depending on the weather. Equipment deterioration continues to be a serious problem, and the requested overhead cover will go a long way towards reducing the losses.
3. We recommend consideration of the following details in the construction of overhead cover:
  - a. Concrete decking sloped several inches above the surrounding area
  - b. Drainage gutter around roof
  - c. Brick storage sheds with metal sliding doors that can be locked
  - d. Electricity/lighting in bays and storage sheds
  - e. For each battalion four extra bays to accomodate 105mm howitzers
4. Point of Contact for 10th Marines is LtCol V. L. FISCHER or Capt C. W. SCHMITT, ext. #3933/3467.

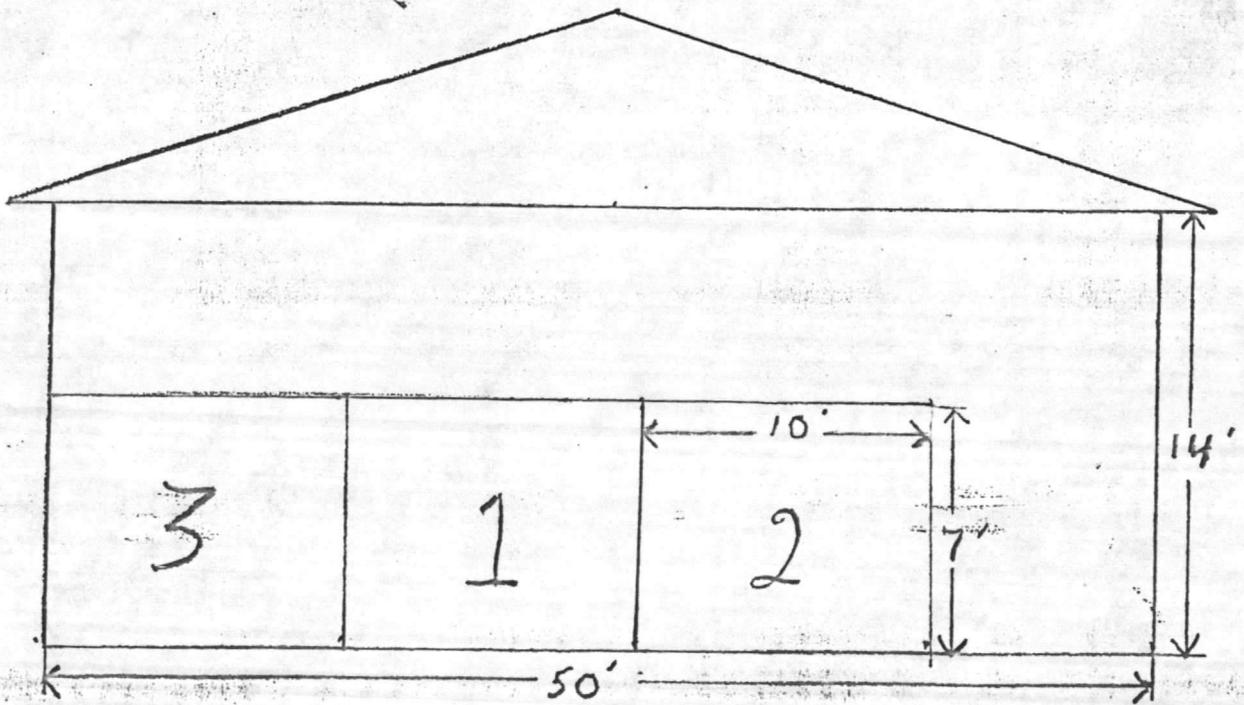
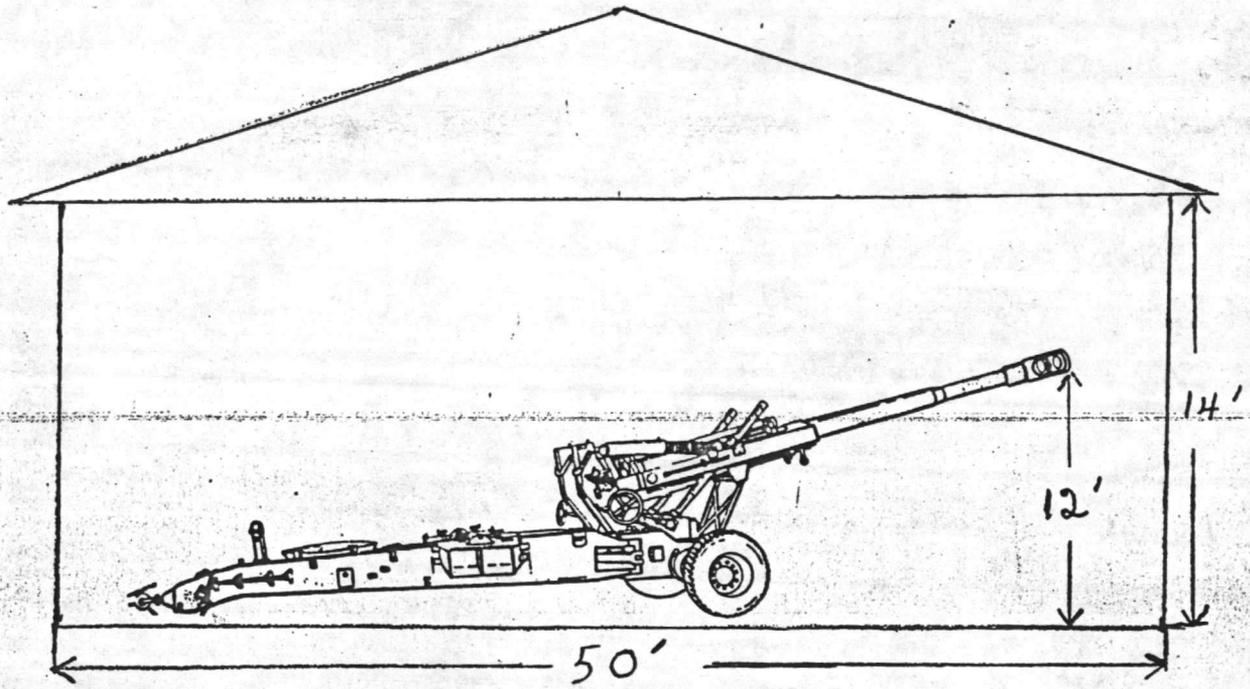
*V. L. Fischer Jr.*  
V. L. FISCHER, Jr.  
By direction

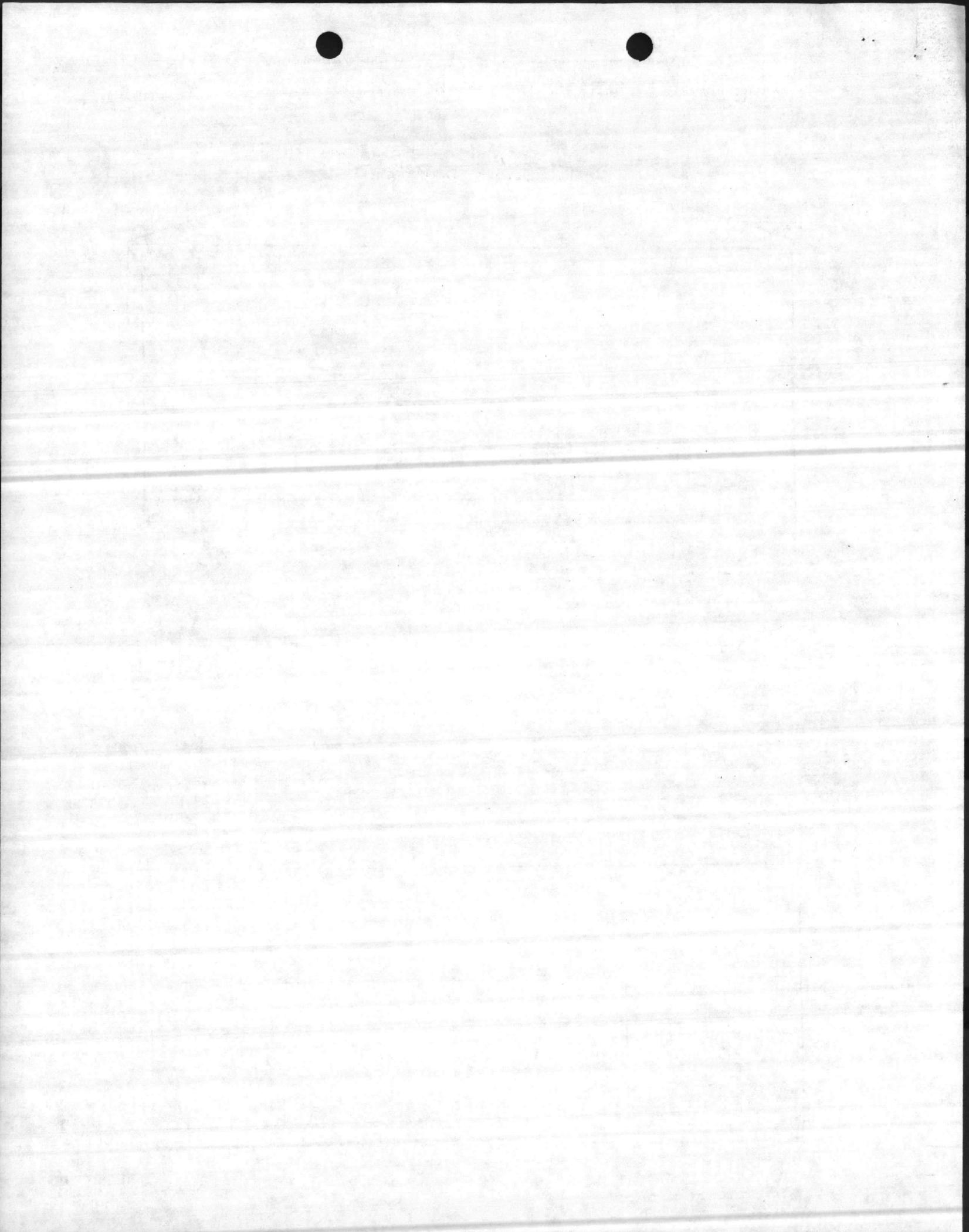
*encl 2*











1. COMPONENT MARINE CORPS		FY 19 <sup>88</sup> MILITARY CONSTRUCTION PROJECT DATA		REVISED 31 Jan 86
3. INSTALLATION AND LOCATION MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA 28542			4. PROJECT TITLE COMBAT VEHICLE MAINTENANCE SHOPS	
5. PROGRAM ELEMENT	6. CATEGORY CODE 214-51	7. PROJECT NUMBER P-678	8. PROJECT COST (\$000) 6,700	

9. COST ESTIMATES				
ESCALATED TO APRIL 1988				
ITEM	U/M	QUANTITY	UNIT COST	COST (\$000)
COMBAT VEHICLE MAINTENANCE SHOPS				4,137
Building	SF	61,660	55.87	(3,445)
Overhead shelters	SF	18,100	25.00	(453)
Built-In Equipment	LS	-	-	(239)
SUPPORTING FACILITIES				1,906
Special Construction Features				(105)
Utilities	LS			(486)
Roads, Parking, Sidewalks	LS			(750)
Site Improvements	LS			(291)
Vehicle/Gun Wash Station w/pollution control control	SY	3,800	72.18	(274)
SUBTOTAL				6,043
CONTINGENCY- 5%				302
TOTAL CONTRACT COST				6,345
SUPERVISION, INSPECTION & OVERHEAD - 5 5%				349
TOTAL REQUEST *				6,694
TOTAL REQUEST ROUNDED				6,700
EQUIPMENT PROVIDED FROM OTHER APPROPRIATIONS			(Non Add)	0

\*Cost based on COMNAVFACENCOM certified cost verification of 9 Dec 85.

10. Description of Proposed Construction:

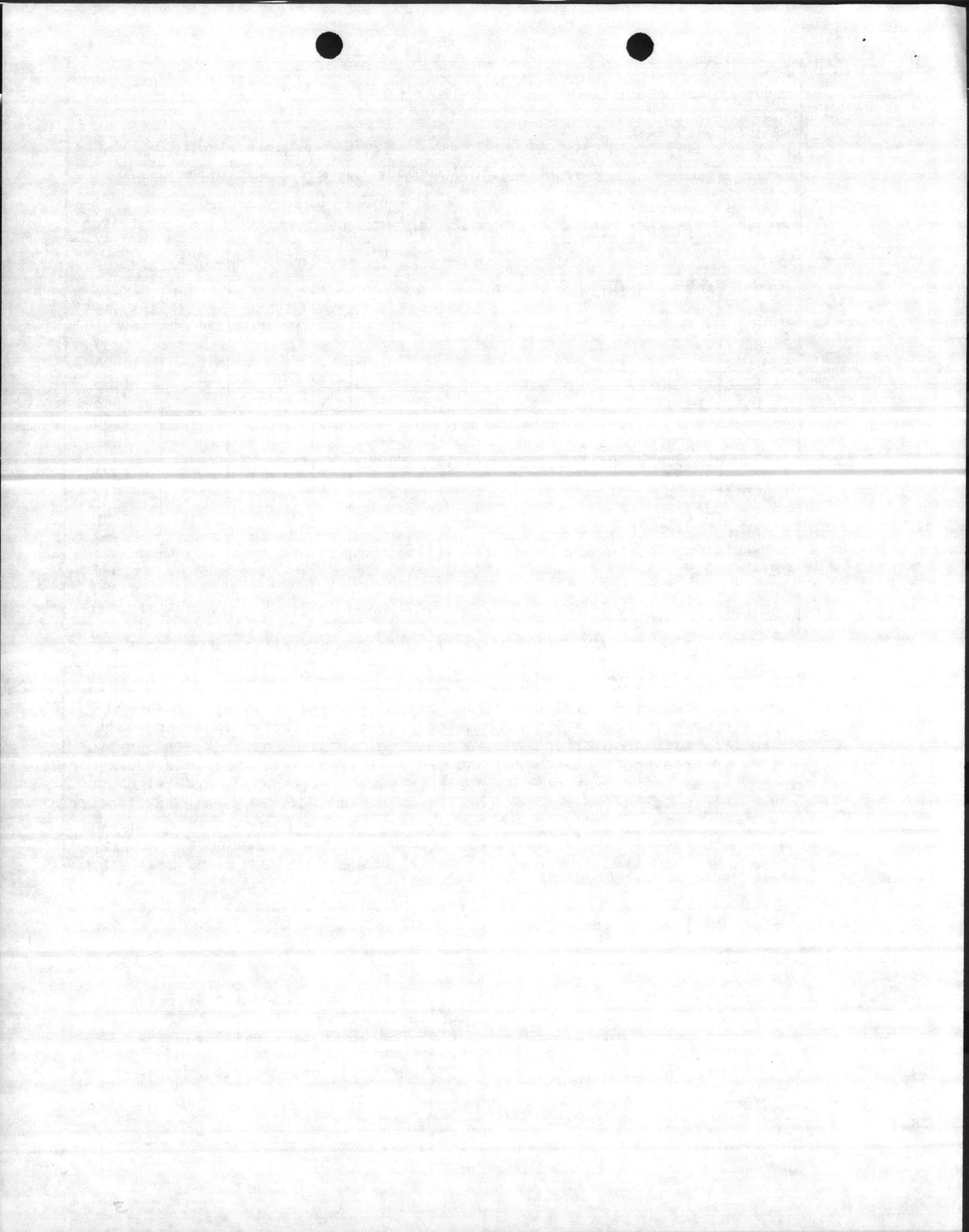
Construct two (2) maintenance facilities with high bays of reinforced concrete on pile foundation with masonry walls, concrete floors and built-up roofing with insulation and a connecting concrete road between the 5th Battalion Area and the 1st, 2nd and 3rd Battalion Area. Overhead doors in bay areas, fire protection and alarm systems, telephones and telephone equipment installation, energy conservation and pollution abatement features are included in project. Overhead shelters for howitzers, wash aprons and oil/water separators and hazardous flammable storage, pavements, security fencing and lighting, and utility connections are included, and demolition as required. (Air Conditioning: 10 tons)

11. \*REQUIREMENT: 402,531SF Adequate: 177,664SF Substandard: 133,472SF

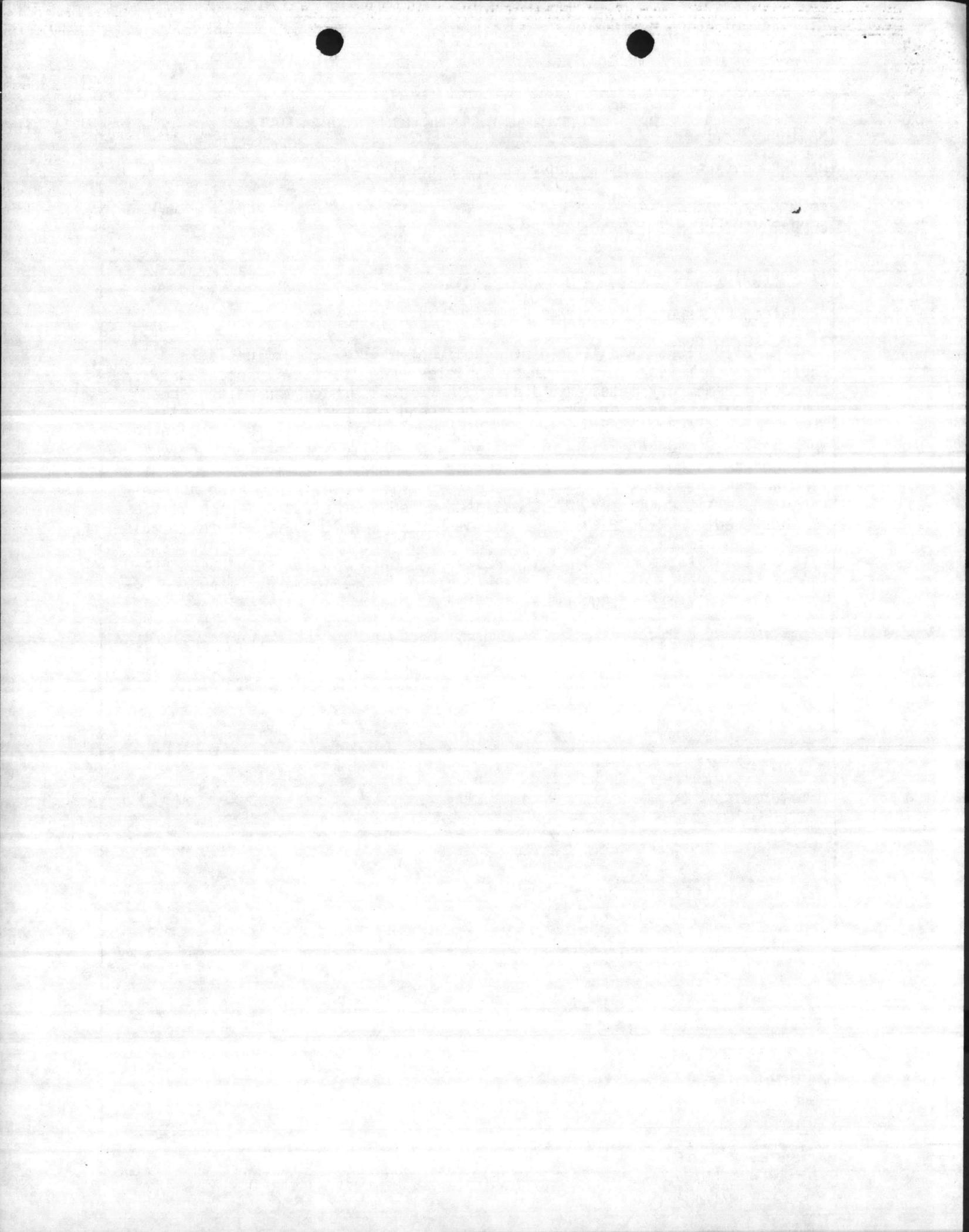
PROJECT: Provide (two) adequate Combat Vehicle Maintenance/Ordnance Shops for the 10th Marine Regiment.

REQUIREMENT: The 10th Marine Regiment has the responsibility to provide proper and efficient 1st and 2nd echelon maintenance for artillery and organic combat vehicles. This includes radio jeeps, forklifts, trailers, ambulances, trucks, wreckers, refrigeration units, bulldozers and decontamination units. The number of trucks and other vehicles organic to the Regiment is 400. Over 156 personnel will work in these facilities.

ENCL (3)



1. COMPONENT MARINE CORPS	FY 19 <sup>88</sup> MILITARY CONSTRUCTION PROJECT DATA	2. DATE REVISED 31 Jan 86
3. INSTALLATION AND LOCATION MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA 28542		
4. PROJECT TITLE COMBAT VEHICLE MAINTENANCE SHOPS	5. PROJECT NUMBER P-678	
<p>11. <u>REQUIREMENT: (cont'd)</u></p> <p>*Requirement is based on NAVMC Form 10651 dtd 12 Nov 85</p> <p><u>CURRENT SITUATION:</u> The 10th Marine Regiment is now performing 1st and 2nd echelon maintenance for combat vehicles and artillery in open Gun Park areas and temporary metal buildings. They lack such common maintenance support features as hydraulic lifts, overhead craneways, oil and grease lines, compressed air, oil traps, environmental protection features, proper work benches, adequate lighting and overhead shelters to perform preventive maintenance to Howitzers assigned to the 10th Marine Regiment. Reorganization and changes in weaponry have created deficiencies along with a new target acquisition battery that has been added to the 10th Marine Regiment.</p> <p><u>IMPACT IF NOT PROVIDED:</u> The 2nd Marine Division Artillery Regiment's maintenance capability and combat readiness will continue to be impaired. Work will continue to be done in scattered substandard facilities causing prolonged maintenance efforts with the resulting increase in deadlined equipment, adversely affecting combat readiness.</p>		



1. COMPONENT  
MARINE CORPS

FY 1988 MILITARY CONSTRUCTION PROJECT DATA

2. DATE  
REVISED  
31 Jan 1986

3. INSTALLATION AND LOCATION

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA 28542

4. PROJECT TITLE

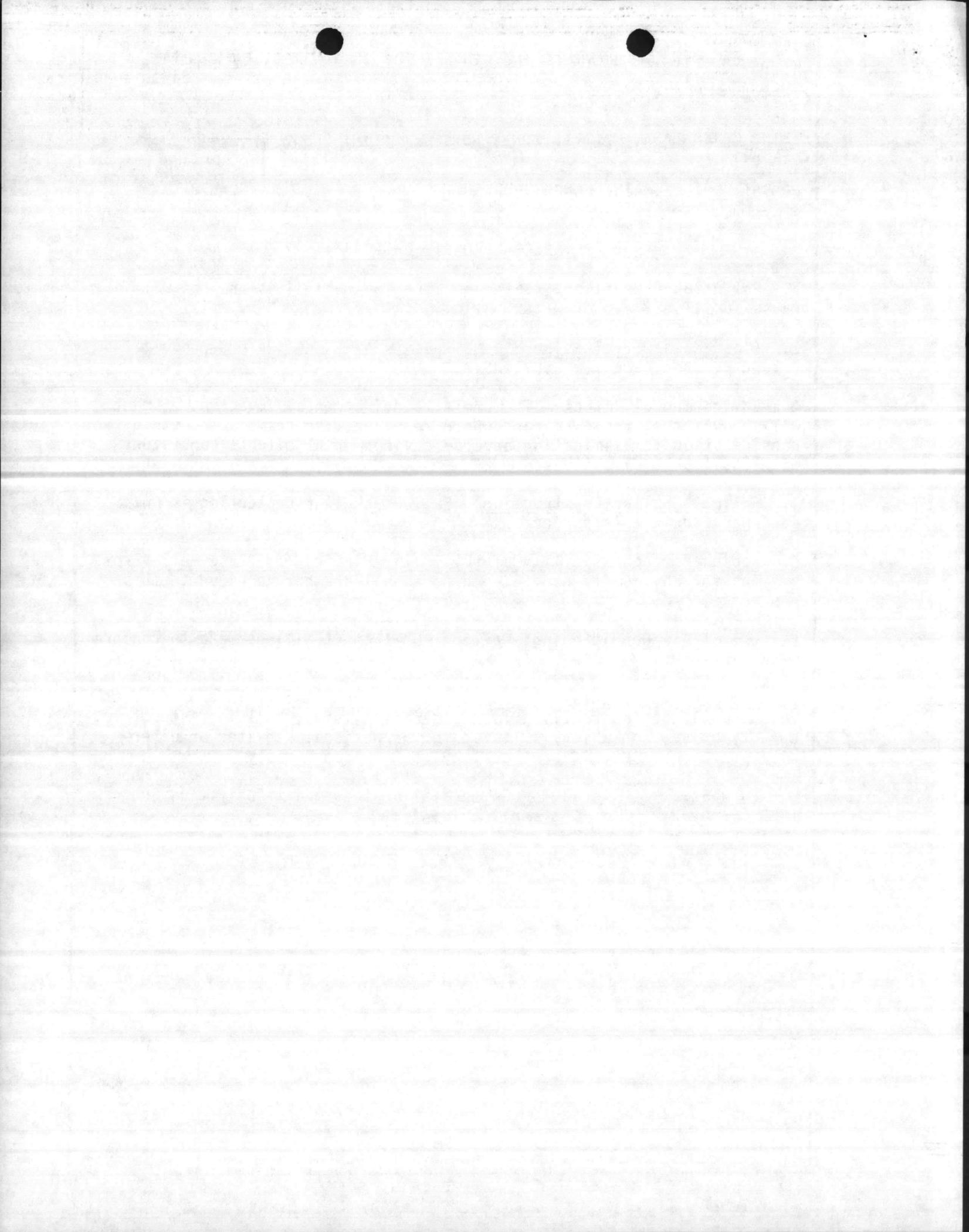
COMBAT VEHICLE MAINTENANCE SHOPS

5. PROJECT NUMBER

P-678

SPECIAL CONSIDERATIONS

1. Pollution Prevention, Abatement, and Control: This project will not cause additional air or water pollution.
2. Flood Hazard Evaluation: Requirements of Executive Order No. 11296 (Flood Hazards) are not applicable.
3. Environmental Impact: The project Environmental Impact Assessment will be written, reviewed, and where required, the design concepts given consideration to eliminating adverse environmental effects consistent with applicable directives.
4. Fallout Shelter Construction: Fallout shelter protection is not incorporated in this project.
5. Design for Accessibility of Physically Handicapped Personnel: Provisions for physically handicapped personnel are not required in this project.
6. Use of Air Conditioning: Ceiling "U" factors will be made to conform with DOD 4270.1-M.
7. Preservation of Historical Sites and Structures: This project does not directly or indirectly affect a district, site, building, structure, object, or setting which is listed in the National Register or otherwise possesses a significant quality of American history.
8. "New Start" Criteria for Commercial or Industrial Activities Program (OMB Circular A-76): Not applicable.



3. INSTALLATION AND LOCATION  
MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA 28542

4. PROJECT TITLE **COMBAT VEHICLE MAINTENANCE SHOP** 5. PROJECT NUMBER **P-678**

FACILITY STUDY

1. Provide two Vehicle Maintenance Facilities for the 10th Marines Regiment; a Vehicle/Ordnance Maintenance facility for the 4th Bn, 10th Marines, a Vehicle/Engineer Support Equipment Maintenance Facility for Headquarters Battalion/Target Acquisition Battery, 10th Marines. Provide a connecting concrete road between the 5th Battalion Area and the 1st, 2nd and 3rd Battalion Area.

2. Current and Planned Future Workload With Regard to this Project: The percentage of usage for these facilities is 100 percent of the time, and the duration of need is indefinite. There is no projected decrease in the necessary maintenance and repair of organizational equipment required to be performed in these facilities.

3. Description of Proposed Construction:

a. Type of Construction:

(1) Permanent wheeled and tracked Combat Vehicle/Ordnance/Engineer Equipment Maintenance Facilities. The facilities will be constructed with steel frame, masonry construction with pile and reinforced concrete foundations, built-up roof over insulation, interior and exterior utility systems along with telephone and telephone equipment installation.

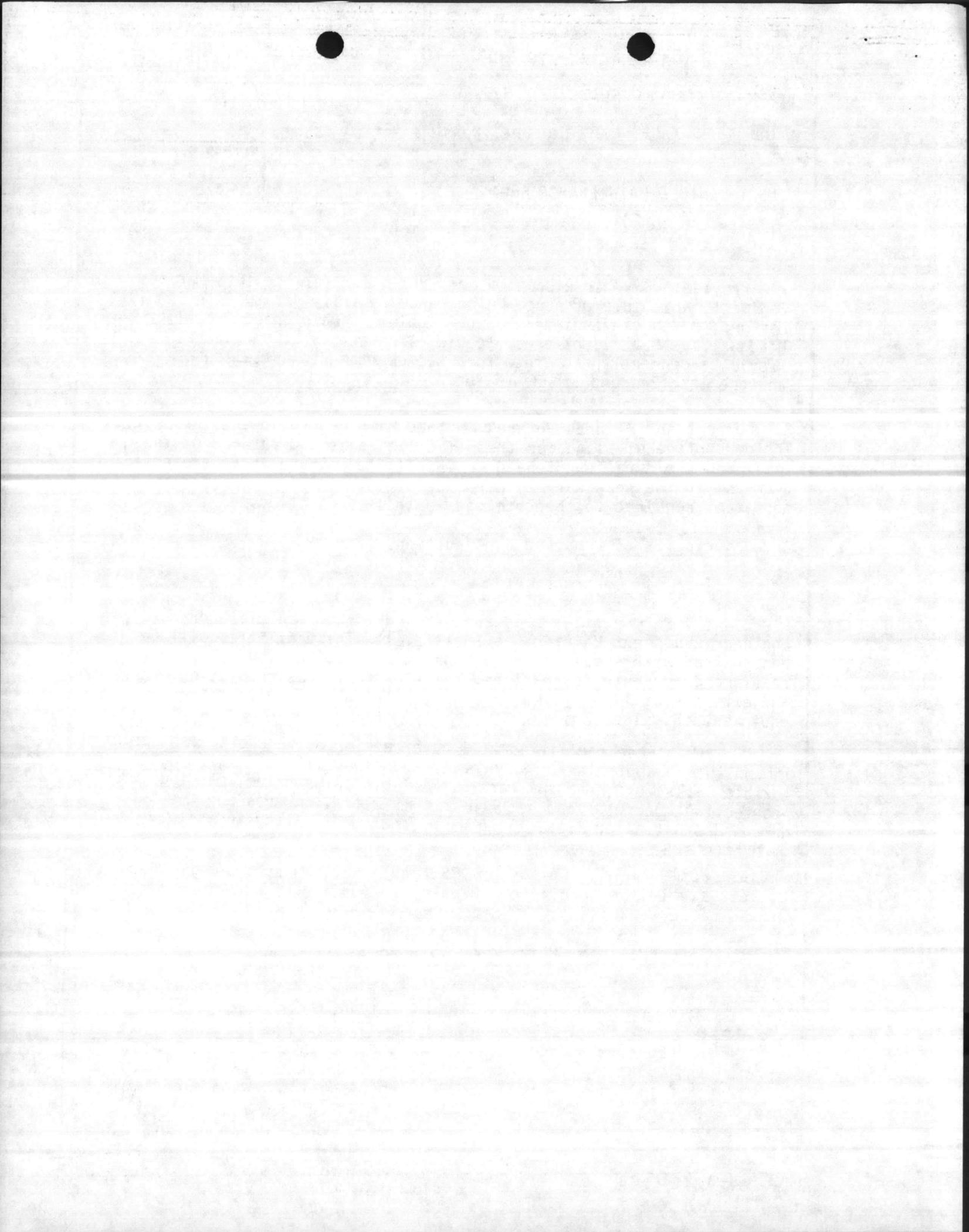
(2) These facilities will have reinforced concrete wash aprons with pollution controls and sand haul away capabilities, rigid and flexible walks, overhead shelters with electrical service, parking and a connecting concrete road between the 5th Battalion Area and the 1st, 2nd and 3rd Battalion Area, along with fencing, lighting and site improvements.

b. Replacement: Buildings 1750 and 1755, two substandard Block Buildings, will be demolished to make way for the construction of the new HQ Battery Facility.

c. Description of Work to be Done:

(1) Primary Facilities (3): Steel frame, modular reinforced concrete/masonry structure on pile foundation.

(2) Support Facilities: Rigid and flexible pavements, security fencing and lighting, connecting utilities site improvements wash and oil/grease facility with pollution abatement controls with sand removal capability, and overhead shelters with electrical service.



1. COMPONENT

MARINE CORPS

FY 1988 MILITARY CONSTRUCTION PROJECT DATA

2. DATE

REVISED

31 JAN 1986

3. INSTALLATION AND LOCATION

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA 28542

4. PROJECT TITLE

COMBAT VEHICLE MAINTENANCE SHOP

5. PROJECT NUMBER

P-678

3. Description of Proposed Construction: (Continued)

(3) Energy Conservation: Energy efficient equipment and building orientation for maximum energy conservation will be utilized.

(4) Collateral Equipment: To be provided by separate correspondence. The present Estimated Value of this equipment is \$60,000.

(5) Supporting Facilities: Special piling, foundations, connecting utilities, a connecting concrete road, site improvements, pollution abatement and hazardous flammable storage.

4. Cost Estimate: The area cost factor for Camp Lejeune is 0.86. Cost data derived from Military Construction Cost Review Guide, for FY-84 (4270.1G). Cost escalated to April 1988.

5. Justification for Project and for Scope of Project:

a. Justification for Project:

(1) Project: Proposed facility is required to provide the Artillery Regiment (10th Marines 2MARDIV) adequate and secure facilities to perform Combat Vehicle/Ordnance Maintenance.

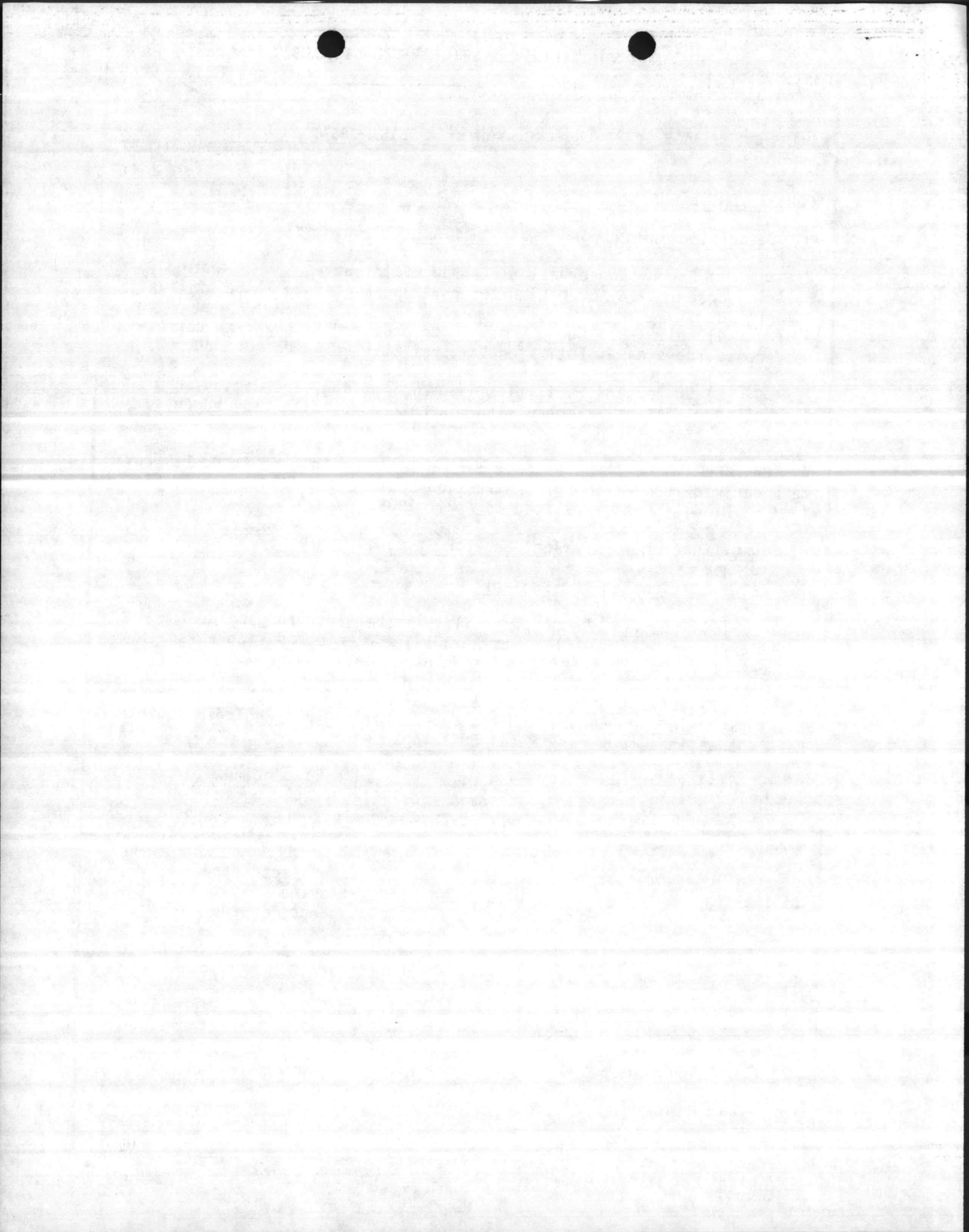
(2) Current Situation: Personnel are now accomplishing Ordnance Maintenance in open Gun Park Areas and Combat Vehicle/Engineer Equipment Maintenance in a temporary Metal Building.

(3) Impact if Not Provided: Personnel will continue to perform Maintenance in substandard makeshift facilities resulting in time-consuming and inefficient operations with loss of work time and wasted energy.

b. Justification of Scope of Project: The project scope, 61,600 is the minimum total size for (2) two facilities to meet the prescribed space requirements to perform maintenance for the 10th Marine Artillery Vehicle/Ordnance equipment.

6. Equipment Provided From Other Appropriations: Not Applicable.

7. Common Support Facilities. There are no common support facilities in Hadnot Point appropriate to this sort of maintenance requirement.



3. INSTALLATION AND LOCATION  
MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA 28542

4. PROJECT TITLE  
COMBAT VEHICLE MAINTENANCE SHOP

5. PROJECT NUMBER  
P-678

8. Effect on Other Resources: This project will require some increase to the O&M, MC funding requirements since some of these Maintenance operations will be transferred from outdoor open lot to indoor lighted and heated areas. No additional personnel will be required to operate this function. This project will enhance and improve the morale of personnel. Proposed construction should be responsive to the challenges presented by the energy situation and comply with the requirements of Executive Order 12003 of 20 July 1977 and implemented by NAVFACINST 4100.5A.

9. Siting of the Project: These two buildings will be sited in the Division Shop Area. See enclosure (1) for the two sites.

10. Other Graphic Presentations, Including Photographs: None.

11. Economic Analysis: This facility is being constructed on a site adjacent to a developed area. Economic savings will be in nominal energy consumption savings to be realized from efficient operations. This is a military operational project in support of a mission in this area.

12. Environmental Impact: An environmental impact assessment of the area has been made and it has been determined that this project will have neither a significant impact on the environment nor is it highly controversial.

13. Quantitative Data:

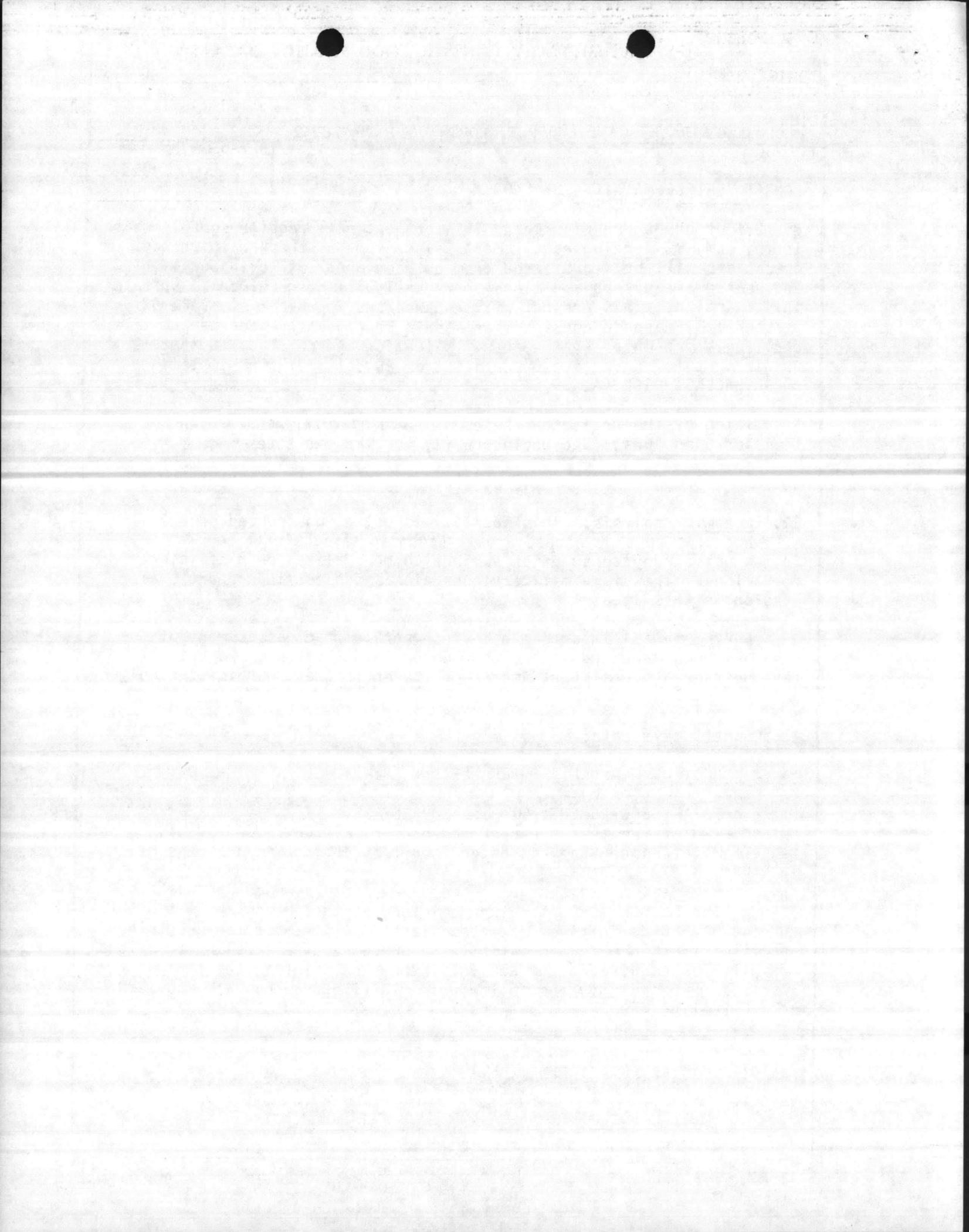
a. UNIT OF MEASURE "SQUARE FEET"

b. TOTAL REQUIREMENT: 402,531 SQUARE FEET

NAVFAC P-80 states that the requirement for Category Code 214-51, Combat Vehicle Maintenance Shop, is determined from definitive drawings given in NAVFAC P-272, Part IV.

The reorganization and changes in weaponry that has occurred with the 10th Marine Regiment has created deficiencies that cannot be met with current NAVFAC definitive drawings. Each facility must meet certain specifications in order to satisfy the space requirements and functional capabilities required to effectively store and maintain the equipment involved. Accordingly the following definitive drawings are provided as a guideline for design purposes:

Function	Total Square Ft	Definitive Dwg No.
Vehicle/Ordnance Maintenance Facility	36,260SF	1293372
Vehicle/Engineer Support Maintenance Facility	25,400SF	1293371
Overhead Shelter	18,100	None



3. INSTALLATION AND LOCATION  
**MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA 28542**

4. PROJECT TITLE **COMBAT VEHICLE MAINTENANCE SHOP** 5. PROJECT NUMBER **P-678**

13. Quantitative Data: (Continued)

- c. EXISTING SUBSTANDARD 133,472 SQUARE FEET
- d. EXISTING INADEQUATE .0 SQUARE FEET
- e. EXISTING ADEQUATE 177,664 SQUARE FEET
- f. OTHER ASSETS, NOT IN INVENTORY - 0 SQUARE FEET
- g. FUNDED, NOT IN INVENTORY 70,174 SQUARE FEET

<u>PROJ. NO.</u>	<u>AREA(SF)</u>	<u>STATUS</u>
P-526	30,837	FY-87
P-196	30,837	FY-90
P-568	8,500	FY-90

- h. ADEQUATE ASSETS (e + f + g) 247,838 SQUARE FEET
- i. DEFICIENCY (b - h) 155,006 SQUARE FEET

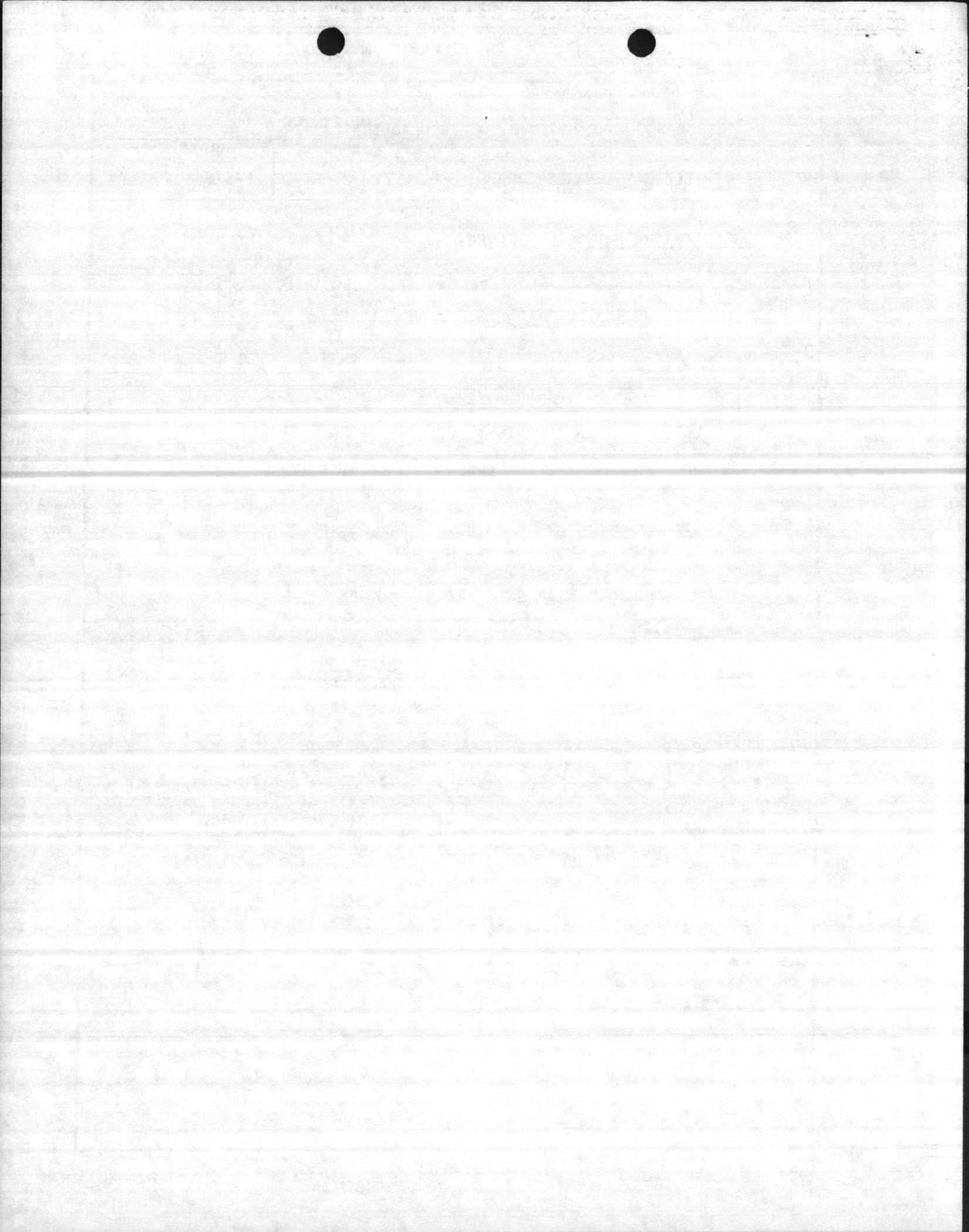
Total Requirement	402,531 SQUARE FEET
Adequate Assets	-247,838 SQUARE FEET
Deficiency	154,693 SQUARE FEET

14. Maintenance Facilities:

Planning factors have been identified in terms of quantitative workloads that have been supported by the level of utilization. Each of the three facilities have certain specifications in order to satisfy the space requirements and functional capabilities to effectively store and maintain the equipment involved. This information has been provided by letter 11000 dated 14 Jan 1985, from the Commanding Officer of the 10th Marine Regiment.

- 15. Morale, Welfare and Recreation Facilities: Not Applicable.
- 16. Relocation Facilities: Not Applicable.
- 17. Storage Facilities: Not Applicable.
- 18. Hazards Identification, Assessment and Analysis:

a. System safety engineering and management programs will be used to ensure that the highest possible degree of safety and occupational health is designed into these facilities.



1. COMPONENT

FY 1988 MILITARY CONSTRUCTION PROJECT DATA

2. DATE  
REVISED  
31 JAN 1986

MARINE CORPS

3. INSTALLATION AND LOCATION

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA 28542

4. PROJECT TITLE

COMBAT VEHICLE MAINTENANCE SHOP

5. PROJECT NUMBER

P-678

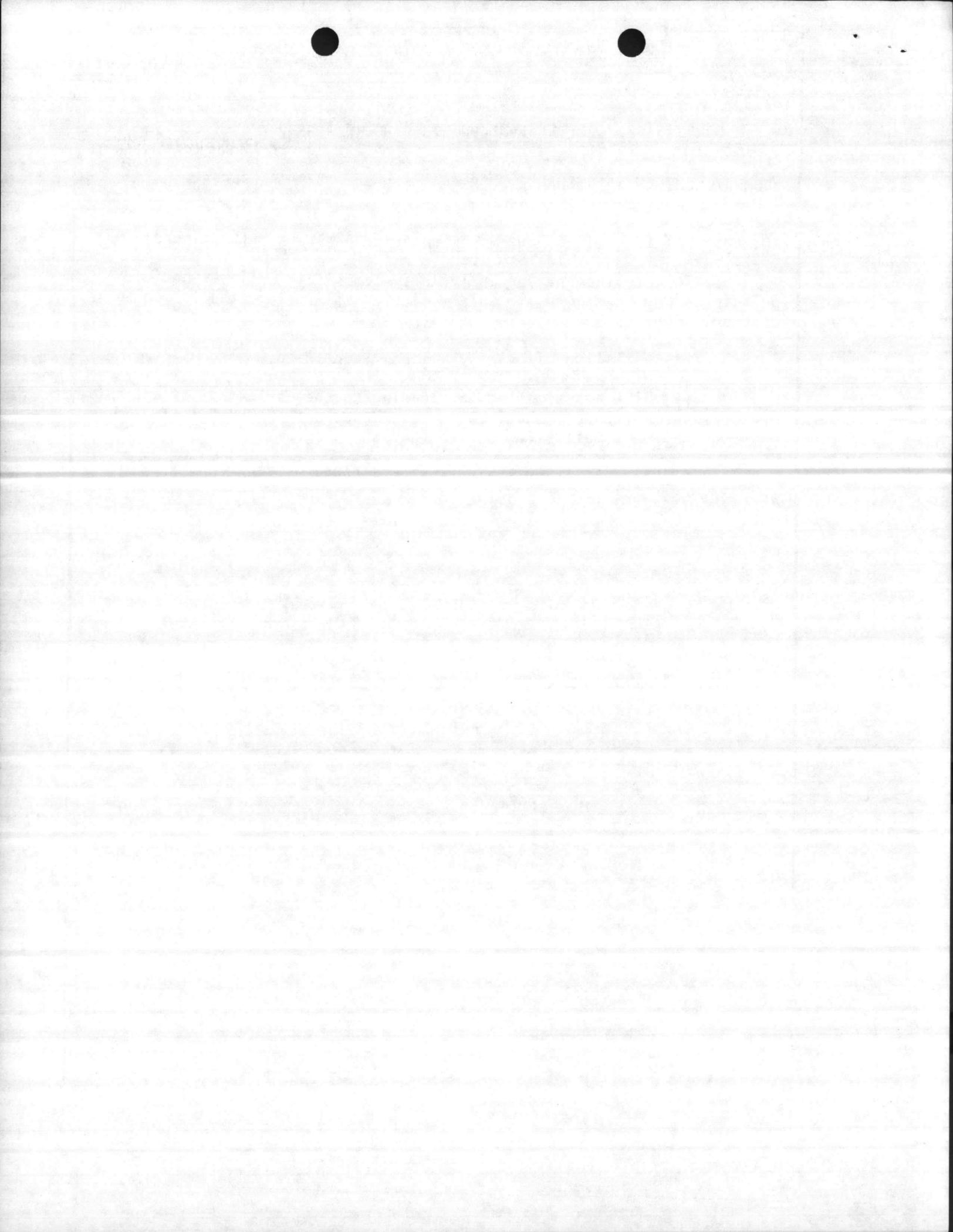
18. Hazards Identification, Assessment and Analysis: (Continued)

b. The requirement for applying system safety engineering principles and management to this facility will include the following documentation:

(1) A listing of primary hazards identified.

(2) Risk assessment data, leading to the assignment of a "risk assessment code", shall be in accordance with OPNAVINST 5100.23, Navy Occupational Safety and Health (NAVOSH) program.

(3) A preliminary hazard analysis (PHA) will be submitted as required.



SITE LOCATION MAP

P-678

COMBAT VEHICLE MAINTENANCE SHOP

-  ASPHALT SURFACES
-  GRAVEL ORD. SURFACES
-  RAILROAD
-  FENCE

SUPPLY AND INDUSTRIAL AREA

HQ & TAB

GUN PARK AREA

4TH BN.

RECREATION AREA & POND

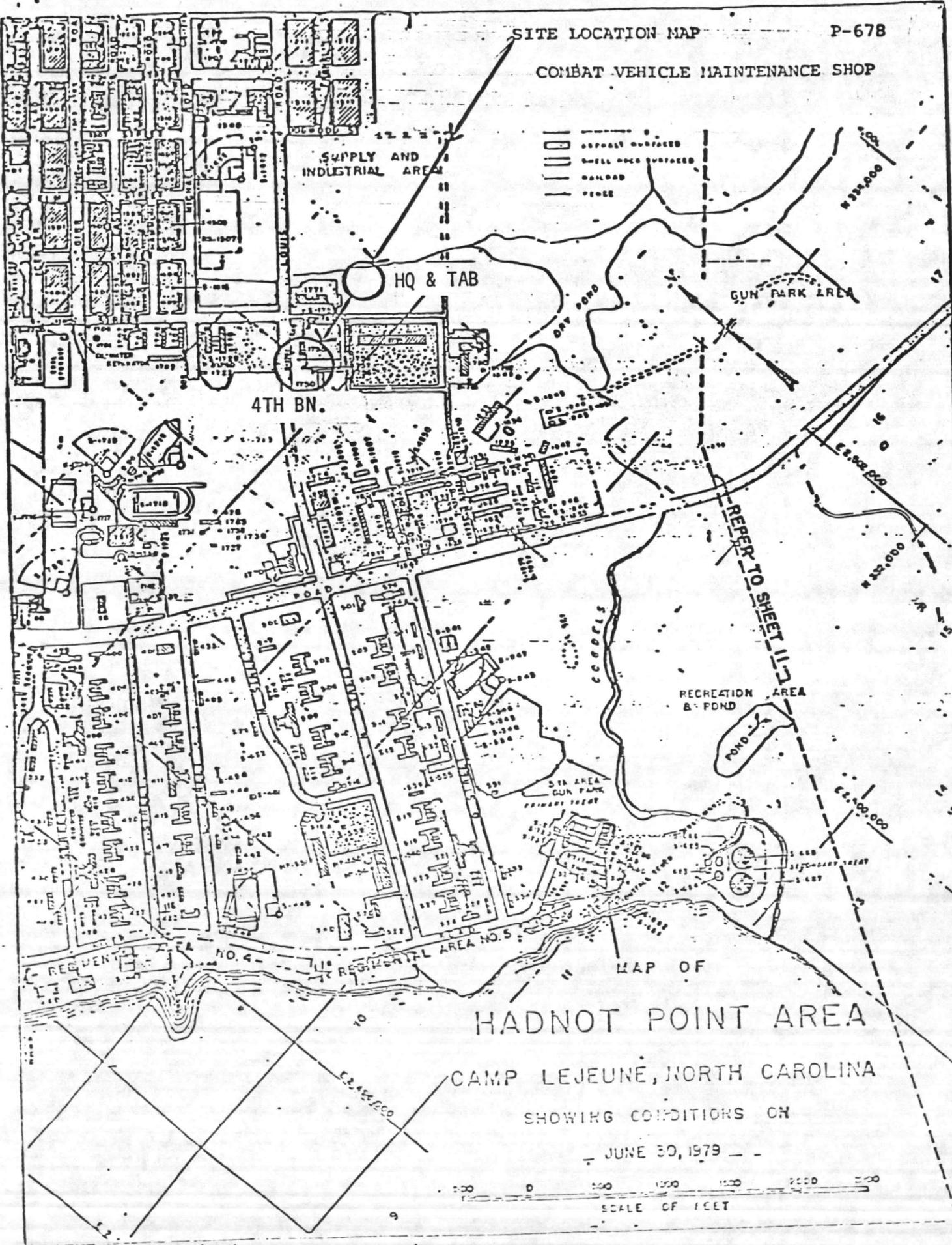
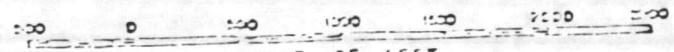
# HADNOT POINT AREA

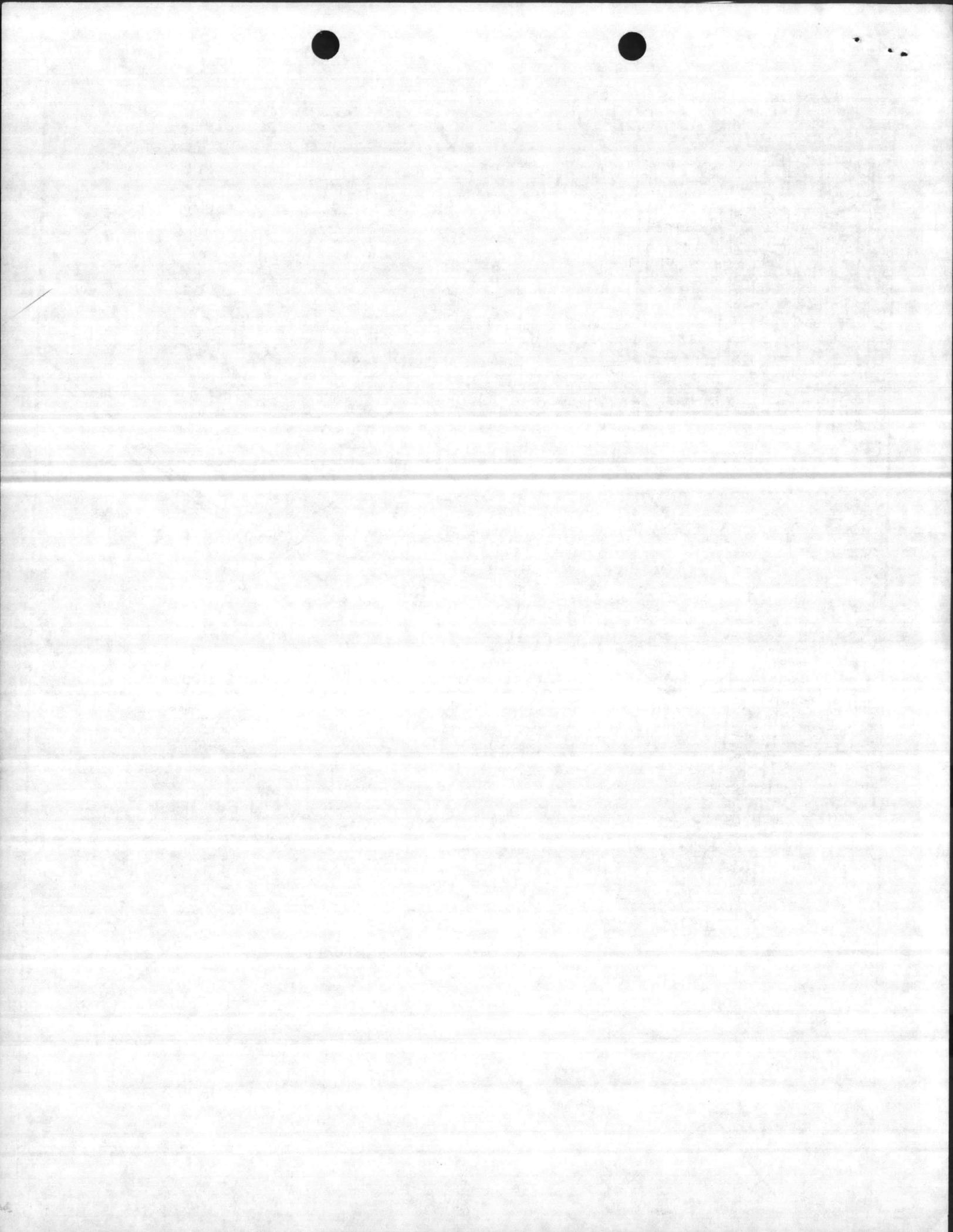
## CAMP LEJEUNE, NORTH CAROLINA

SHOWING CONDITIONS ON

JUNE 30, 1979

SCALE OF FEET





15 Apr 86

From: Planning Section, Public Works, Marine Corps Base, Camp  
Lejeune, NC  
To: Commanding Officer, 10th Marines, 2d Marine Division, FMF  
Subj: Collateral Equipment Requirements List  
Encl: (1) Listing of collateral Equipment for P-678 Combat  
Vehicle Maintenance Facility, FY-88 MCON Project

1. Enclosure (1) is a preliminary list of collateral equipment prepared from the definitive drawings for the subject MCON project. It is requested that you look it over and record the number of expense and training type items needed to furnish the classrooms, offices and admin sections with appropriate equipment. If there are any items that you need not already recorded, please list them.

2. If you have any questions, please contact Ms M. Thompson or Mr. F.W. Estes on 1833.

P-678 COMBAT VEHICLE MAINTENANCE SHOP 4/10

Air hose reel 150 PSI w/hose control valve and hose stops

Elec. extension cord reel HD w/cord stop

Water hose reel HD w/hose control valve & hose stop

Hose reel assembly w/control valves HD overhead auto hose stops  
and meters 1-chassis lube, 2- motor oil, 1 gear oil, 1 hydraulic  
fluid

Exhaust system underground

Exhaust system overhead

Deluge shower

Acid resistant sink

Exhaust hood (over)

Pass window 4'0" w/counter & "B" label roll down shutter

Lube dispensing eqpt w/accessories

Air pumps 400 lb drums for oil (chassis, gear, motor oil,  
transmission fluid, hydraulic fluid)

Twin post hydraulic lift, HD 4,000 lb capacity

Twin post hydraulic lift, HD, 11,000 lb capacity

10 ton overhead monorail

1 ton overhead monorail

Heating, Ventilating, Air Conditioning

Plumbing and Steam Systems (interior)

Sprinkler System

Fire Alarm, Telephone and Intercom Systems

Lockers, wall mounted

Locker Room benches 6'long

Expense Items:	HQ/TAV Veh Eng	Veh Ord
Benches, Work portable 48"x28"x34"	12	12
Bench, work portable 72"x28"x34"H	05	02
Bench work stationary 28"x34"x38"	07	03
Parts bin, adj shelving	62.5	76 ft
Tire storage rack 48"x18"x73 1/4	08.5	08.5
Parts Rota bins	03	02
Tire Changer	01	01
Test tank (water)	01	01
Acetylene cutting & Welding kit	01	00
Welder, elec, AL shop type	01	00
Battery charger, 6-12 V selenium type	01	01
Tire vulcanizer HD	01	01
Shelving 14"W	31.5	66 ft
Shelving 12"W	25.5	16 ft
(1 large classroom/2 offices/M.T. admin/Eng Eqpt admin)		
(1 large classroom/2 offices/M>T> admin/Tracked veh admin)		
Desk, flat top dbl ped 60x30"		
Desk, flat top 45x30" walnut pattern top		
Desk, flat top w/ attachment (sect'y/gen'l admin)		
Chair, rotary, tilting seat w/arms & casters		
Chair, sect'y adj. seat height		
stand, office machine 2 drop lvs		
Typewriter, IBM, elec		
Filing cabinet, 5 dwr legal size		

Expans Items:	Qty	Unit Price	Total Price	Part No	Part Desc
Benches, work portable 48"x28"x34"	12			12	
Bench, work portable 72"x28"x34"	02			02	
Bench work stationary 38"x34"x32"	07			07	
Extra bin, adj shelving	02.5			02.5	
File storage rack 48"x18"x23 1/2"	02.5			02.5	
Basic Koda bins	02			02	
Tire Changer	01			01	
Test tank (water)	01			01	
Acetylene cutting & welding kit	01			01	
Welder, elec, 51 shop type	01			01	
Battery charger, 6-12 V automatic type	01			01	
Tire vibrator HP	01			01	
Shelving 14"W	31.5			31.5	
Shelving 12"W	22.5			22.5	

(1 large classroom\2 offices\M.T. admin\hdg admin)  
 (1 large classroom\2 offices\M.T. admin\trashed ven admin)

Desk, list top dbl bed 60x30"  
 Desk, list top 48x30" walnut pattern top  
 Desk, list top w/ attachment (see V\gen\ admin)  
 Chair, rotary, filing and 4 drawers  
 Chair, wood, adj. seat height  
 stand, office machine 2 top lvs  
 Typewriter, IBM, elec  
 Filing cabinet, 5 drawer legal size

Storage cabinet dbl door

Bookcase 48" overall height

Bookcase, 29-1/2" overall

Chair, straight, w/o arms

Costumer, 4 dbl hooks

Rack, wearing apparel 6 mtl hangers

Draperies

Blackout draperies

Desk, lamp

Adding Machine

Table, general purpose 60X30X30

Student chairs

Fire Extinguisher 15 lb, C0-2

" " 2-1/2 gal, H2-0

" " fire, dry chemical

Training Equipment:

Movie Projector

Overhead Projector

Movie Screen

Storage cabinet, 54" door

Bookcase, 48" overall height

Bookcase, 28-1/2" overall

Chair, straight, w/o arms

Coat rack, 4 5/8" hooks

Rack, wearing apparel & mail holders

Draperies

Blackout draperies

Desk, lamp

Light fixture

Table, general purpose 60X30X30

Student chairs

Fire Extinguisher 15 lb, CO-2

" " 2-1/2 gal, H2O

" " Fire, dry chemical

Training equipment

Movie projector

Overhead projector

Movie screen

3/14/86

Gene Ep

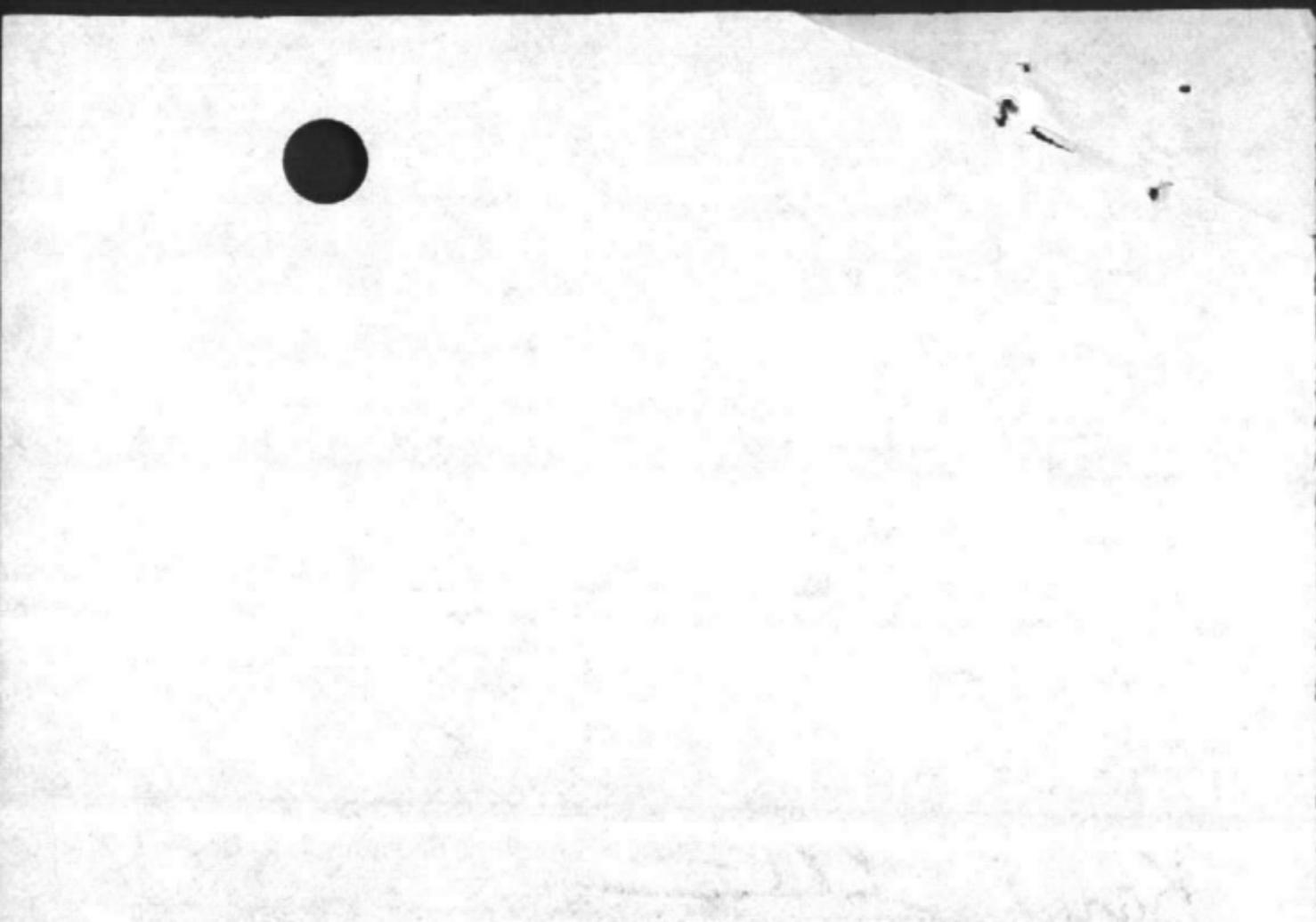
Larry W

Fred th

Mary

Karen KMF

Def #  
1293371  
1293372





DEPARTMENT OF THE NAVY

ATLANTIC DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND  
NORFOLK, VIRGINIA 23511-6287

10 *hasen*  
TELEPHONE NO.  
(804)444-9696 408  
AUTOVON 564-9696  
IN REPLY REFER TO:

4490  
09A23A

11 MAR 1986

From: Commander, Atlantic Division, Naval Facilities Engineering Command  
To: Commanding General, Marine Corps Base, Camp Lejeune, North Carolina  
28542

Subj: COLLATERAL EQUIPMENT REQUIREMENTS FOR FY 1988 MILITARY CONSTRUCTION  
PROJECT P-678, COMBAT VEHICLE MAINTENANCE SHOPS

Encl: (1) Guidelines for Developing Collateral Equipment requirements for MCON  
Project Engineering Documentation  
(2) Sample Collateral Equipment List  
(3) Copies of NAVFAC Form 5ND LANTDIV 4-11010/6, Collateral  
Equipment Requirements (Initial Outfitting) (4 copies)

1. The list of collateral equipment for Military Construction (MCON) projects, particularly in the area of built-in equipment, provides essential data required to develop the Project Engineering Documentation (PED) and plans/specifications. This list is also the basis for the appropriate budgetary action to provide funds for the initial outfitting of the completed project.

2. Enclosure (1) was specifically developed for preparation of equipment lists for inclusion in the PED. Particular attention is invited to the information concerning the various equipment categories, under one of which each equipment item shall be reported. Inasmuch as the category determines the fund source, inventory cognizance or logistical responsibility, the requirements should be identified and reported correctly. Enclosure (2) provides the format for submission of collateral equipment requirements.

3. Due to current budget cuts, as well as cuts anticipated in the future, it is essential that equipment on hand, in a useable condition, be transferred to the new or renovated facility. Consequently, the collateral equipment in your custody now, which may be transferred to the new facility, should not be included in the submission.

4. It is requested that requirements for the subject project be submitted on enclosures (3) to this Command, attention Code 09A23. This submittal should be forwarded in time to be received by 5 May 1986. Due to the scheduled preparation of the PED in the near future, compliance with the submission date is requested.

*20 Jun 86*

11-108-800  
0-3333  
11-108-800

From: Commander, Atlantic Division, Naval Facilities Engineering Command  
To: Lieutenant General, Marine Corps, Camp Lejeune, NC, 28541

Subject: 11-108-800, CONRAD VEHICLE MAINTENANCE SHOP

- (1) Copy of VTRAC Form and LTR (11-108-800, Collected)
- (2) Copies of VTRAC Form and LTR (11-108-800, Collected)
- (3) Equipment Requirements (Initial Outfitting) - 1 copy

1. The list of collected equipment for Military Operations (MOP) projects, and other in the area of military operations, provide essential data required to develop the Project Engineering Documentation (PED) and many other documents. This list is also the basis for the completed military action to provide the initial outfitting of the completed project.

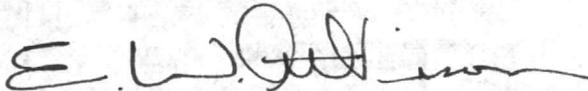
2. Enclosure (1) was specifically developed for preparation of equipment lists for inclusion in the PED. Enclosure (2) provides the information concerning the various equipment categories, under one of which each equipment item shall be reported. This list is the category identifier. The third source, inventory control and logical responsibility, the equipment is shown as identified and related to the project. Enclosure (3) provides the format for the collection of collected equipment lists.

3. Due to current budget cuts, as well as our activities in the future, it is essential that equipment on hand, in a usable condition, be identified. Consequently, the detailed equipment list for our activity now, which may be transferred to the next activity, should be included in this submission.

4. It is requested that requirements for the subject project be identified in enclosure (1) to this Command, attention 11-108-800. This information should be forwarded to the appropriate activity, due to the equipment list being requested. It is requested that the equipment list be forwarded to the appropriate activity.

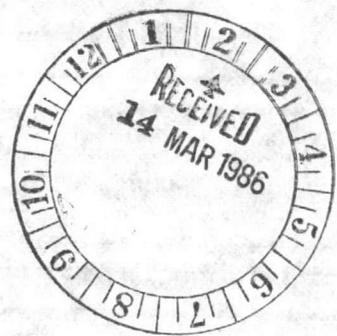
Subj: COLLATERAL EQUIPMENT REQUIREMENTS FOR FY 1988, MILITARY CONSTRUCTION,  
NAVY PROJECT P-678, COMBAT VEHICLE MAINTENANCE SHOPS

5. Communications regarding collateral equipment requirements should be directed to this Command, attention: Mrs. Thelma T. Wheeler, Code 09A23A, telephone (804) 444-9696, or AUTOVON 564-9696.



E. W. ATKINSON, P.E.  
By direction





PA DIRECTOR  
E. M. VIKINGSO, P.E.

Telephone (804) 444-2030 or (410) 444-2030  
directed to this company attention: Mrs. Dennis L. Moseley, code 03732  
2. Communications regarding collection of bills and payments should be

MAIL PROJECT 5-918 COMBAT SERVICE MAINTENANCE GROUP  
PART: COMMERCIAL EQUIPMENT REQUIREMENTS FOR FY 1988 MILITARY CONSTRUCTION

GUIDELINES FOR DEVELOPING COLLATERAL EQUIPMENT  
REQUIREMENTS FOR MCON/MCNR PROJECT ENGINEERING DOCUMENTATION

1. Equipment should be limited to that which is required to achieve the facility's designed functional capability. Equipment in excess of identified requirements or having the appearance of being wasteful of Government funds shall not be included. Items not generally considered as acceptable for Navy use and which will not be funded, include but are not limited to: decorator rugs or area rugs for office spaces, antique furniture or period reproductions, figurines or objects of art, elaborate wall or window coverings, original paintings or signed/numbered prints, mirrors, wall sconces, free standing decorator items (such as large world globes), leather covered furniture, etc. The basic objective should be to select furniture, furnishings and equipment which meet the functional purpose of the space; are pleasing to the eye; and have the least life-cycle cost. If two or more items have roughly the same product life expectancy, the one with the least initial cost should be selected.

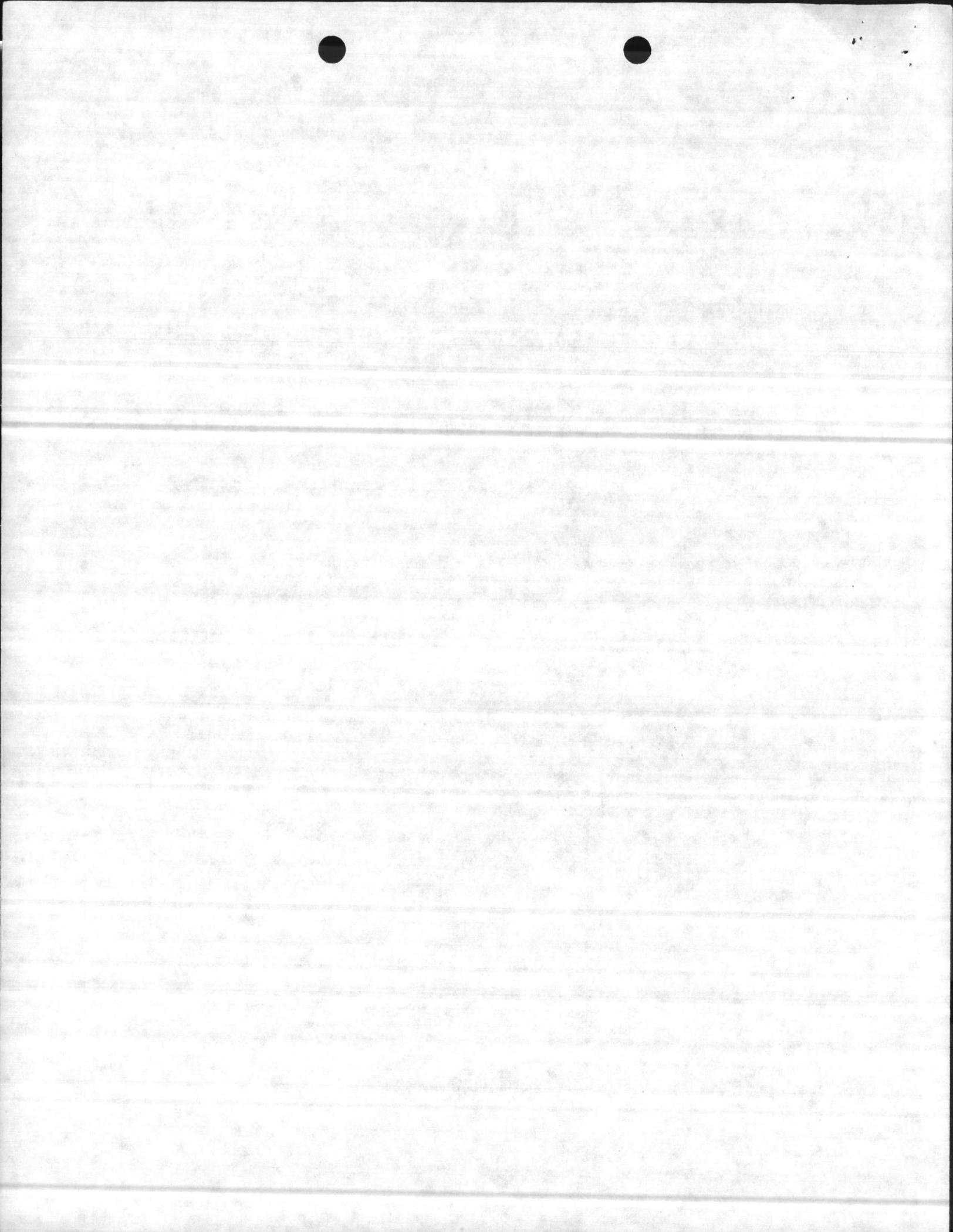
2. Equipment shall be selected which is, to the maximum extent possible, available from the Federal Supply System, General Services Administration stock, Federal Prison Industries or other established Government sources. Military and/or federal specifications shall be applied, whenever possible, for items not available from an established federal source. When procurement from commercial sources is necessary, adequate descriptive details should be provided. Vague descriptions with unrealistic cost estimates are not acceptable. It is recommended that the procurement source data such as GSA supply schedules, manufacturers' catalogs, or other information which is available in the activity supply office be utilized in preparing requirements lists.

3. The following information is provided to facilitate identification and separation of equipment requirements by collateral equipment categories.

a. Built-in Equipment to be Funded with Military Construction (MCON) Funds

Normally, the costs of all items of equipment which are permanently built-in or attached to the structure, including items with "fixed" utility connections, are funded from MCON appropriations. "Fixed" means fastened to walls, floors, or ceiling, or to steam, gas, vacuum, plumbing, or electrical lines in a permanent manner. The following items are typical examples:

- Furniture, cabinets and shelving, built-in
- Venetian blinds and shades
- Window screens and screen doors
- Elevators and escalators
- Drinking water coolers
- Telephone, fire alarm and intercom system
- Theatre seats
- Pneumatic tube systems
- Heating, ventilating and air condition installations



Laboratory furniture, built-in  
Electrical generators and auxiliary gear  
Food preparation and serving equipment built-in  
Dishwashers  
Hoods and vents  
Chapel pews and pulpit  
Refrigerators and reefers, built-in  
Key cabinets  
TV Surveillance Systems  
Crane and hoists  
Bowling lanes, including seating and pin spotting equipment  
UEPH/UOPH wardrobes, built-in or prefabricated  
Wall-to-wall carpeting

b. Equipment Funded from Appropriation other than MCON

The costs of all items of equipment, including furniture and furnishings, which are loose, "portable", "mobile" or can be detached from the structure without tools, are excluded from MCON costs. "Portable" means movable, including that equipment which is attached to utility lines by attachment plug or screw-on fitting. "Mobile" means equipment on wheels or casters. In addition, the costs of permanently attached equipment related directly to the operating function for which the structure is being provided, such as technical, scientific, production and processing equipment, are normally excluded from MCON costs. The following items are typical examples of equipment funded from appropriations other than MCON.

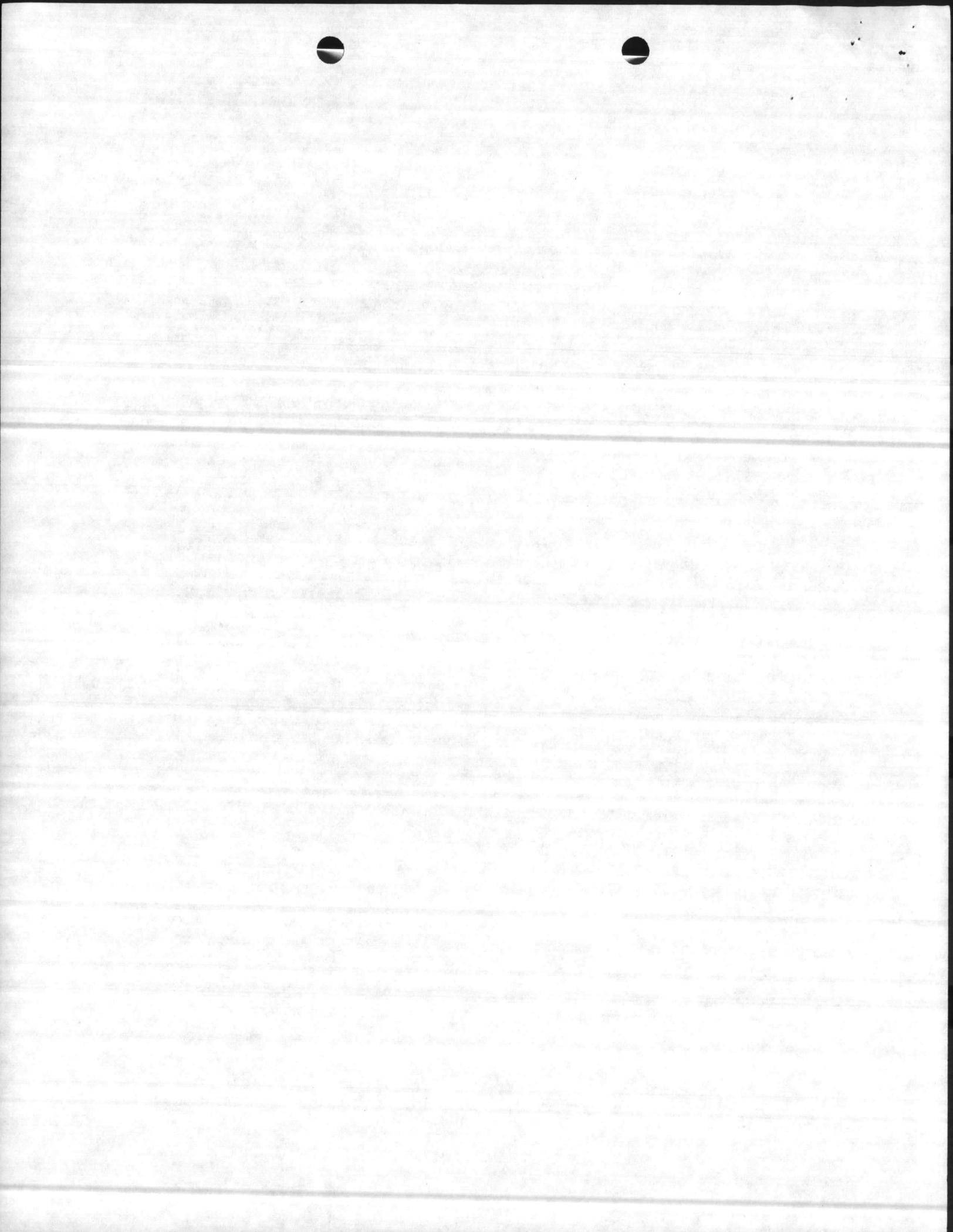
Furniture, loose  
Furnishings, loose, including area rugs  
Filing cabinets and portable safes  
Office machines, portable  
Wall clocks plug-in battery  
Food preparation and serving equipment including appliances; portable  
Training aids and equipment, including simulators  
Shop equipment  
Automatic data processing equipment  
Communications equipment  
Photographic equipment, portable  
Dental chairs and pedestal units

Any operational equipment which installation mounting and connections are provided in building design and which are detachable without damage to the building or equipment.

c. Categories of Equipment Funded from Appropriations Other than MCON

(1) Expense Items. Class III personal property, non-technical collateral equipment such as furniture, furnishings, office machines, medical and dental equipment, shop equipment etc., having a unit price of less than \$3,000 at the time of budgeting.

(2) Investment Items. Class III personal property/Class IV IPE non-technical collateral equipment similar to Expense Items, having a unit value of \$5,000 or more at the time of budgeting.



(3) APA Equipment. Appropriate Purchase Account centrally managed equipment entered in the Federal Supply Catalog, Volume 2 of the Navy Supply Manual and other sources with an even numbered alpha prefix. Such APA equipment is under the cognizance and procurement of a technical sponsor as:

<u>TECHNICAL RESPONSIBILITY</u>	<u>EQUIPMENT TYPE</u>
Naval Air Systems Command	Aviation Support
Naval Electronic Systems Command	Shore Electronics, Communications, Cryptologic
Naval Sea Systems Command	Ships Support, including Electronics and Weapons
Naval Facilities Engineering Command	Civil Engineering Support

NOTE: Where a requirement for APA Equipment exists, particular attention should be directed toward ensuring that total requirements are identified and realistic costs reported. Although the cognizant inventory manager is responsible for the provision of APA equipment associated with MCON/MCNR projects, it nevertheless constitutes a vital cost element of the PED, particularly where sophisticated high-cost equipment is involved (for example, electronic training devices). It should be noted that ordering/obtaining APA equipment is the responsibility of the user.

4. Training Equipment. This equipment is used exclusively for the instruction of personnel and consists of, but is not limited to the following:

(a) Training Aids Equipment. Film projectors, slide projectors, overhead projectors, audio and video recording/playback units and closed circuit television systems.

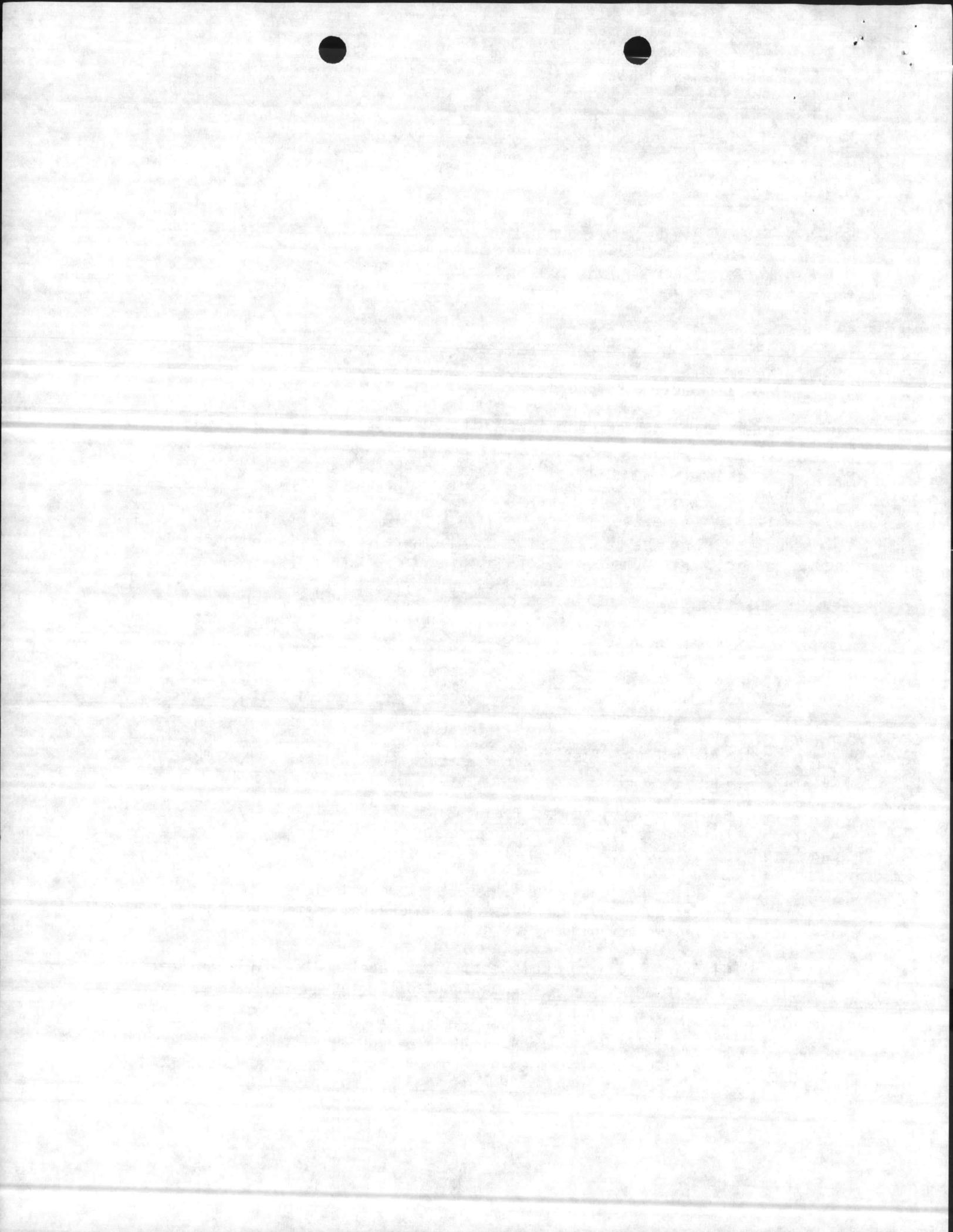
(b) Non-technical Training Equipment. Typewriters, adding machines, calculators, etc.

(c) Commercial Scientific Training Equipment. - Non-Navy sophisticated electronic and scientific equipment normally used in laboratories to teach various physical, chemical and environment phenomena.

(d) Training Devices. Consists of equipment designed specifically to demonstrate or illustrate a concept, or provide a simulated system in which an operator's skills or techniques are developed or improved.

(e) Civilian Training Equipment. Items developed by civilian sources for civilian training which have been adopted for Navy use.

5. Equipment on Hand. This category should receive careful attention. To assure the maximum benefit from the limited resources available, it is incumbent upon all concerned to ensure that items on hand, in good condition



and compatible with the design and function of the new facility, are so identified. This particular category continues to receive close attention from OSD/OMB, NAVCOMPT and various audit offices. Collateral equipment on hand should be identified by appropriate category. The estimated cost should be broken down as follows:

- (a) Total estimated value of reusable equipment.
  - (b) Total relocation/reinstallation costs from old to new structures.
- It will be necessary to break down cost for each item of collateral equipment.
- (c) Total cost to refurbish equipment, when it is economically visible to refinish equipment as opposed to procuring new items.

Those items of equipment which must be provided as Government Furnished Equipment (GFE) for installation by the Contractor should be identified by annotating "GF/CI" after each applicable item.

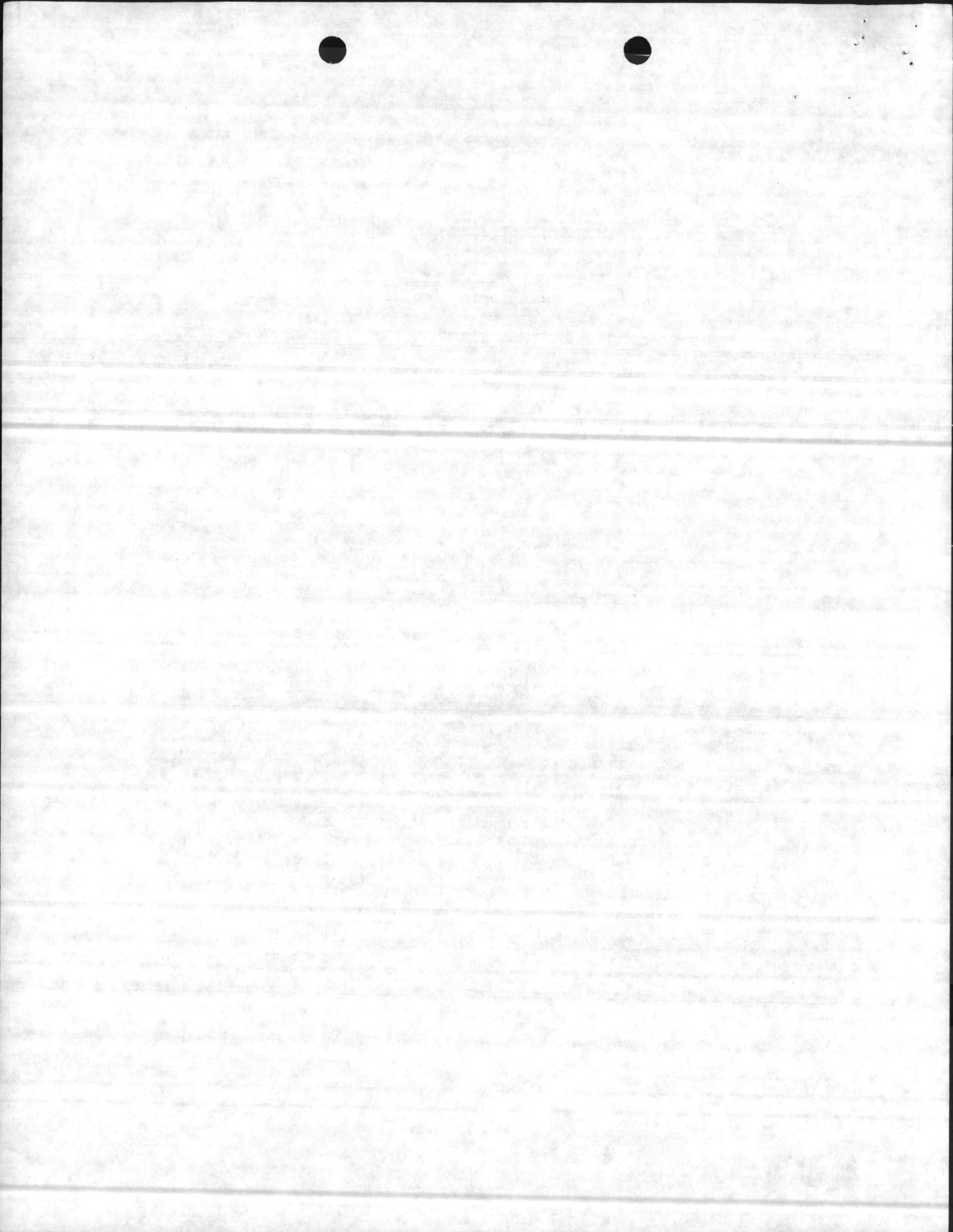
6. Duplicating and office Copying Equipment. The Naval Facilities Engineering Command will fund the procurement of this equipment only if the scope of the MCON/MCNR project includes a new mission or an increase to the present mission. Requests for this equipment should be submitted, if appropriate; however, funding will be contingent upon the activity's compliance with OPNAVINST 5600.20.

7. Audiovisual Equipment. Requirements for this equipment should be listed; however, funding by the Naval Facilities Engineering Command is contingent upon the activity obtaining the necessary CNO approval as required by CNO letter Ser 098P12/306249 of 17 February 1981.

8. Filing Equipment. Requirement should be identified; however, approval to procure must be obtained in accordance with SECNAVINST 10463.1 prior to Collateral Equipment funds being provided. Activities are required to satisfy requirements whenever possible through inter-activity transfer of available filing equipment or by inter-activity transfer of surplus equipment.

9. Portable Fire Extinguishers. Classified as Collateral Equipment and are normally required for MCON projects. The installation of fixed or built-in fire protection systems does not necessarily preclude a requirement for portable equipment. Accordingly, requirements submissions shall include portable extinguishers as required to comply with n.f.p.a. Standard No.10, as contained in Volume 3 of the National Fire Codes. Requirements will be limited to actual quantities needed for installation and shall not include backup or replacement units.

10. Electric Typewriters. Quantities of electric typewriters should be restricted to satisfy requirements for established positions for which a job or billet description includes a typing requirement. SECNAVINST 10460.11 applies.

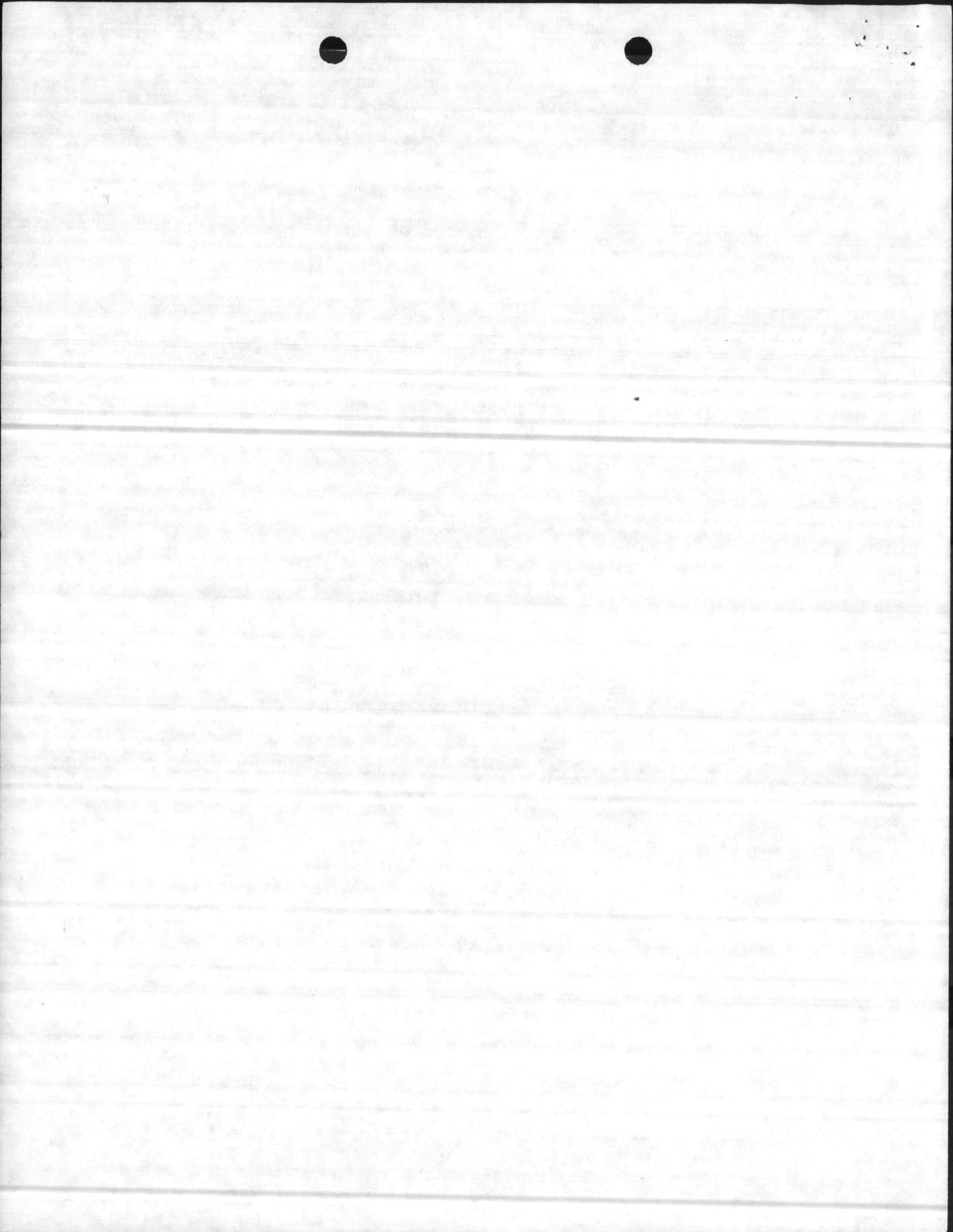


11. Special Equipment/Funding

- a. Computers. Will be approved and funded by major claimants.
- b. Word Processing Equipment. Funding responsibility of the major claimant.
- c. Relocation of Collateral Equipment. Funding responsibility of the major claimant or management Command directing the relocation.

12. Consumable Items. Collateral Equipment does not include minor consumable items. These items are generally short life items which are highly susceptible to loss through wear and tear, pilferage or damage. Some examples are as follows:

- a. Hand and electrical powered tools
- b. Spare parts for mechanical and electrical equipment.
- c. Correspondence trays, calendar pads, pencil sharpeners, hole punches and other office supplies.
- d. Cleaning gear such as mops, buckets, brooms, etc.
- e. Sheets, pillow cases, blankets and shower curtains.
- f. Kitchen cutlery, pots and pans, tableware, condiment containers, and tablecloths.



**COLLATERAL EQUIPMENT REQUIREMENT** (Initial Outfitting)  
 5ND LANTDIV 4-11010/6 (NEW 2-79)

DATE

1. ACTIVITY (Name and Location)

Def Dwg 1293371/2 v'd for build out + Exp.

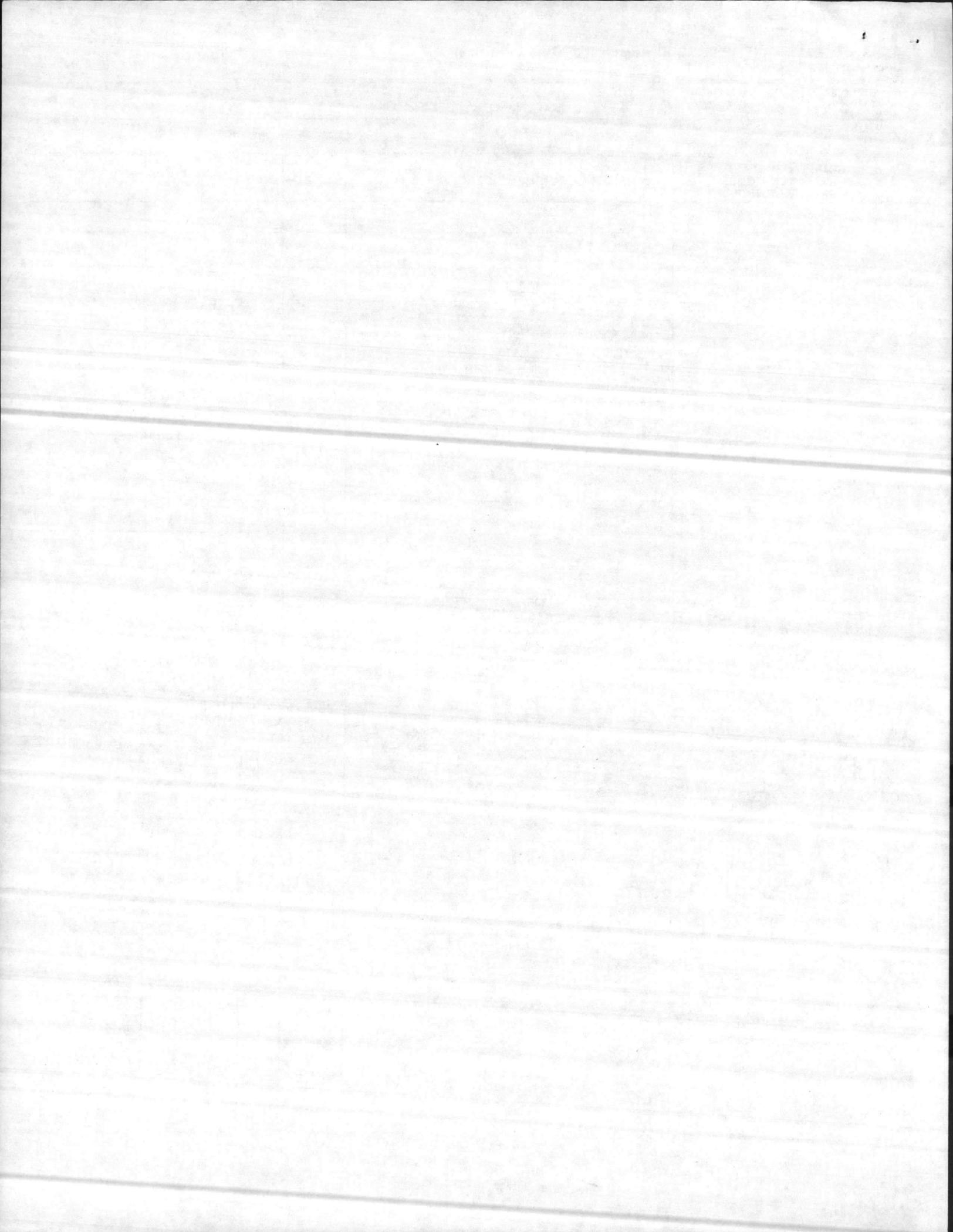
2. PROJECT TITLE

P. NO. P-678

COG. SYMBOL AND FED. STOCK NO. OR OTHER SOURCE	ITEM/EQUIPMENT DESCRIPTION	QUAN- TITY	UNIT OF ISSUE	UNIT PRICE	TOTAL COST
	Air Hose Reel 150 PSI w/hose Central valve + Hose Stops				
	Elec Extension Cord Reel H/S w/cord Stop				
	Water hose Reel H/S w/hose Control Valve + hose Stop				
	Hose Reel assef. w/control Valves H/S overhead auto hose stops + meters				
	(14a) 1-chassis lube				
	2 motor Oil				
	1-Gear oil				
	1-Hydraulic fluid				
	(14b) - Sm-				
	Exhaust Sys underground				
	" " Overhead				
	Deluge Shower				
	Acid Resistant sink				
	Exhaust Hood (over)				
	Pass Window 4'-0" W w/ Counter + "b" label rail down shutter				

10th Mar To maint  
 MTO of Space  
 100 sf.  
 MTChef admin 100 sf.  
 Ord. of Spe.  
 (Classroom, Hood, Scharis)

H/O Bty / H/B  
 Chief / admin Sp. 100 sf  
 OLC  
 MCOIC of Space  
 300 SF.



**COLLATERAL EQUIPMENT REQUIREMENT** (Initial Outfitting)  
 5ND LANTDIV 4-11010/6 (NEW 2-79)

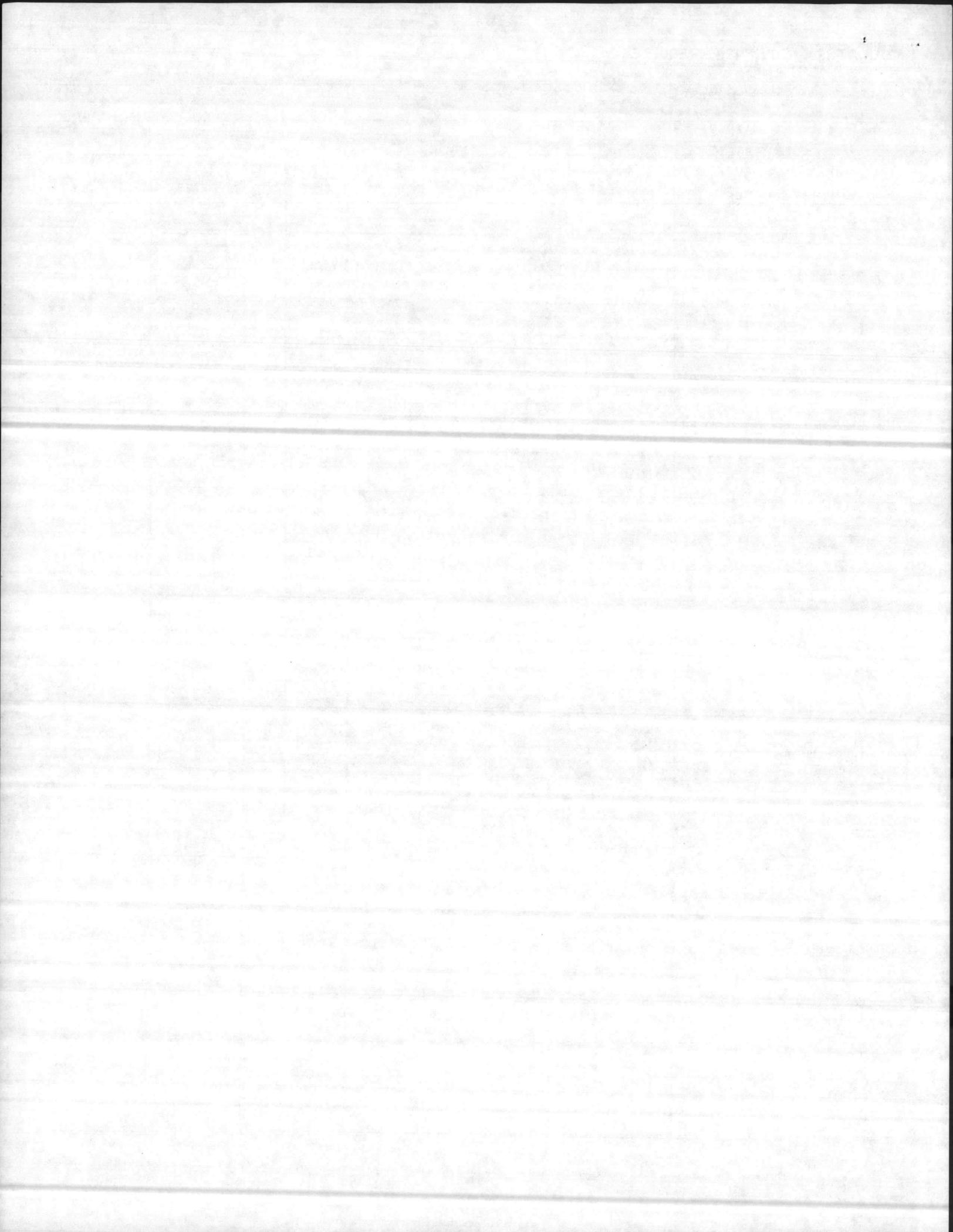
DATE

1. ACTIVITY (Name and Location)

2. PROJECT TITLE

P. NO. P-678

COG. SYMBOL AND FED. STOCK NO. OR OTHER SOURCE	ITEM/EQUIPMENT DESCRIPTION	QUAN- TITY	UNIT OF ISSUE	UNIT PRICE	TOTAL COST
	Lube dispensing Equip + accessories				
	Oil Pumps 400 lb drums for oil, (Chassis, gear motor oil, Transmission fluid, hydraulic fluid)				
# 70-73	Seven Post hydraulic lift, HD 24,000 lb Cap				
	Seven Post Hyd lift. HD 11,000 lb Cap				
	10 Tow overhead mono-pail				
	1 Tow " " "				
	HVAC				
	Plumbing Sep (for <sup>Steam</sup> )				
	Sprinkler Sep				
	Tel, fire alarm, inter				
	Com Sep.				
	Lockers, wall mounted				
	" room benches 6' L				



COLLATERAL EQUIPMENT REQUIREMENT (Initial Outfitting)  
 5ND LANTDIV 4-11010/6 (NEW 2-79)

DATE \_\_\_\_\_

1. ACTIVITY (Name and Location)

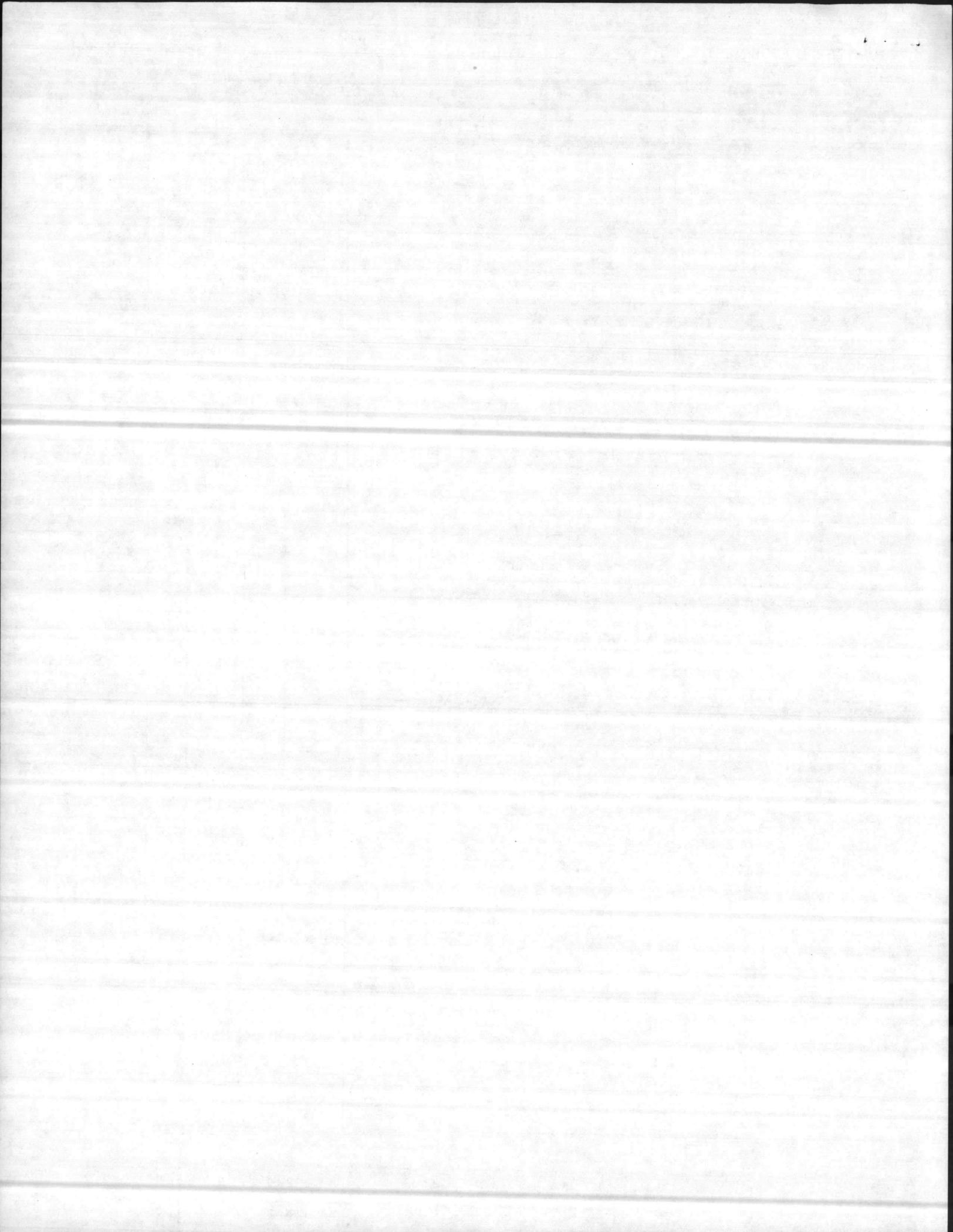
2. PROJECT TITLE

Expense Items

P. NO.

HQ  
TAJ  
Veh Eng Bn

COG. SYMBOL AND FED. STOCK NO. OR OTHER SOURCE	ITEM/EQUIPMENT DESCRIPTION	QUAN- TITY	UNIT OF ISSUE	UNIT PRICE	TOTAL COST
	Benches, Work portable <sup>(1)</sup>			Unit Price	
12	48" x 28" x 34" H.			12	
5	Bench, Work Portable <sup>(2)</sup>			2	
	72 x 28 x 34" H.				
7	Bench, Work Stationary <sup>(3)</sup>			3	
	28" D x 34" H x 38" L				
62.5 ft	Parts Bin and Shelving <sup>(4)</sup>			76 ft.	
8 1/2'	Tire Storage <sup>(5)</sup> racks 48" x 18" x 73 1/4"			8 1/2 ft.	
3	Parts Rate Bins <sup>(6)</sup>			2	
1	Tire changer <sup>(7)</sup>			1	
1	Tire Jack (water) <sup>(8)</sup>			1	
1	Acetylene Cutting & <sup>(9)</sup> Welding Kit			-0-	
1	Welder Elec A.L. Shop Type <sup>(10)</sup>			-0-	
1	Battery charger 6-12V <sup>(10)</sup> Selenium Type Battery Tester			1	



**COLLATERAL EQUIPMENT REQUIREMENT** (Initial Outfitting)  
 5ND LANTDIV 4-11010/6 (NEW 2-79)

DATE

1. ACTIVITY (Name and Location)

2. PROJECT TITLE

P. NO. P-678

COG. SYMBOL AND FED. STOCK NO. OR OTHER SOURCE	ITEM/EQUIPMENT DESCRIPTION	QUAN-TITY	UNIT OF ISSUE	UNIT PRICE	TOTAL COST
	1 Tire Vulcanizer HdD (21)			1	
	31 1/2 ft. Shelving 14" W (25)			66 ft.	
	25 1/2 ft. Shelving 12" W (26)			16 ft.	
1 Lg Classroom				1 Large classroom	
2 offices				2 offices	
MT admin 9x9				M.T. admin 9x9	
Eng Egpt admin 9x9				(410) Tracked Veh Admin 9x9	

7110-00-149-1630	234.23	Desk, flat top, dbl ped, 60x30" walnut pattern top, no overhang
7110-00-149-1628	240.00	Desk, flat top, 45x30" walnut pattern top, no overhang
7110-01-016-6580	225.00	Desk, flat top, w/attachment for secretarial and general clerical purposes
7110-00-082-6229	66.31	Chair, rotary, tilting seat and height, w/arms and casters
7110-00-958-8044	61.82	Chair, secretarial, rotary adj. seat height,
7110-00-685-5534	122.00	Stand, office machine 2 drop leaves, walnut pattern top, w/casters
of IBM	947.00	Typewriter, IBM electric, dual pitch, carbon ribbon, selectric
7110-00-497-2012	146.20	Filing Cabinet, 5 drawer, legal size, w/o lock
7125-00-764-6129	132.27	Cabinet, storage, dbl door, 36"x18" x80-1/16"H
GSA 7110-00-601-9822	82.92	Bookcase, 48" overall height, parch
GSA 7110-00-149-1621	61.02	Bookcase, 29 1/2" overall, parch.
7110-00-782-3503	40.00	Chair, straight, w/o arms

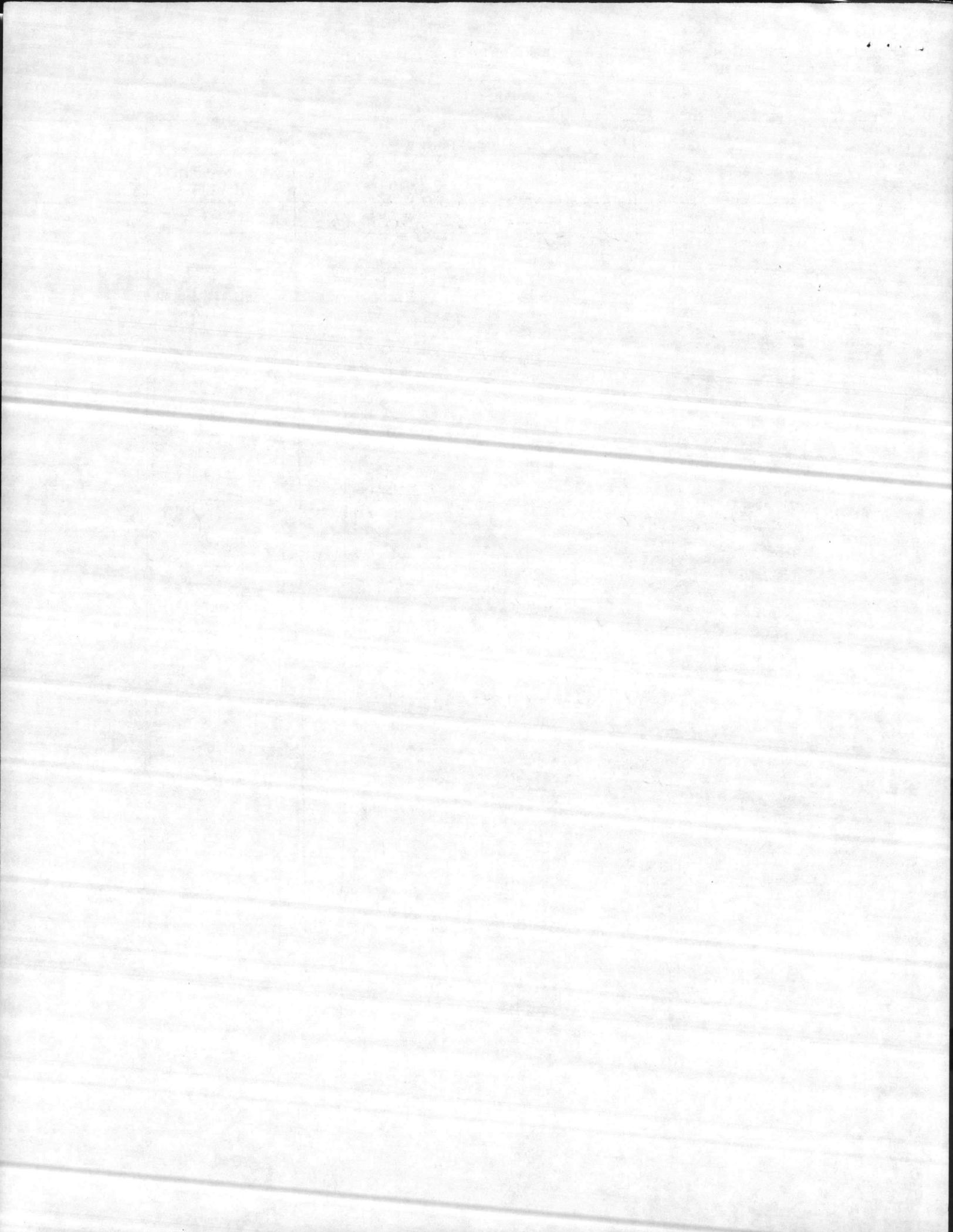
1300

No Listing  
 Capt Marie  
 3467

4 of







P-678

OTHER SOURCE

2. EXPENSE ITEMS: (cont'd..)

7195-00-242-3503	81.50	Costumer, wearing apparel, contemporary, 4 dbl hooks round pole w/round base
7195-00-004-6716	55.63	Rack, wearing apparel, contemporary, 6 metal hangers, 78x30x20 at base.
7520-00-285-5416	2.75	Wastepaper, basket, darkbrown
OP	90-	Draperies
OP	90-	Draperies, blackout
6230-00-682-3423	41.50	Desk, lamp
OP	400.00	Adding Machine, Monroe, Model 1405
OP Carolina Ofs Supply		Bulletin Board, cork, alum frame 4'x6'
7110-00-143-0821	164.00	Table, general purpose 60"x30"x29½"
OP Heywood Wakefield <i>Brodhead Garrett</i>		Student chairs, Model <del>HC-7730- PABSTT</del>
Carolina Office Sup Co		Portable easel
Pressteel Co., 9705 Garvey, Elmonte, CA 91733		Bench, work, electronic, 120/220V 60 cycle and 400 cycle, 28V #EN328 10 LP
		Rack, security, for mechanics tool boxes, 24 openings
4210-00-202-7858	78.66	Extinguisher, fire, 15 lb CO <sub>2</sub>
4210-00-720-1815	27.89	Extinguisher, fire, 2½ gal. H <sub>2</sub> O
4210-00-965-1111	59.00	Extinguisher, fire, dry chemical
		TOTAL EXPENSE ITEMS:

SEATING CHAIR

t to any seating situa-  
 00 Series combines con-  
 with durable, carefree  
 berglass shells are  
 or seating comfort and  
 rect backrest pitch which  
 uch" sitting. Backrest is  
 ther enhance the design  
 B Model 7600 BR Tap-  
 n, Brushed Chrome  
 .....\$82

BRODHEAD-GARRETT  
2448 INDUSTRIAL PARK DRIVE  
MACON, GA 31209  
(912) 781-8925

P-678

## Chairs and Folding Tables

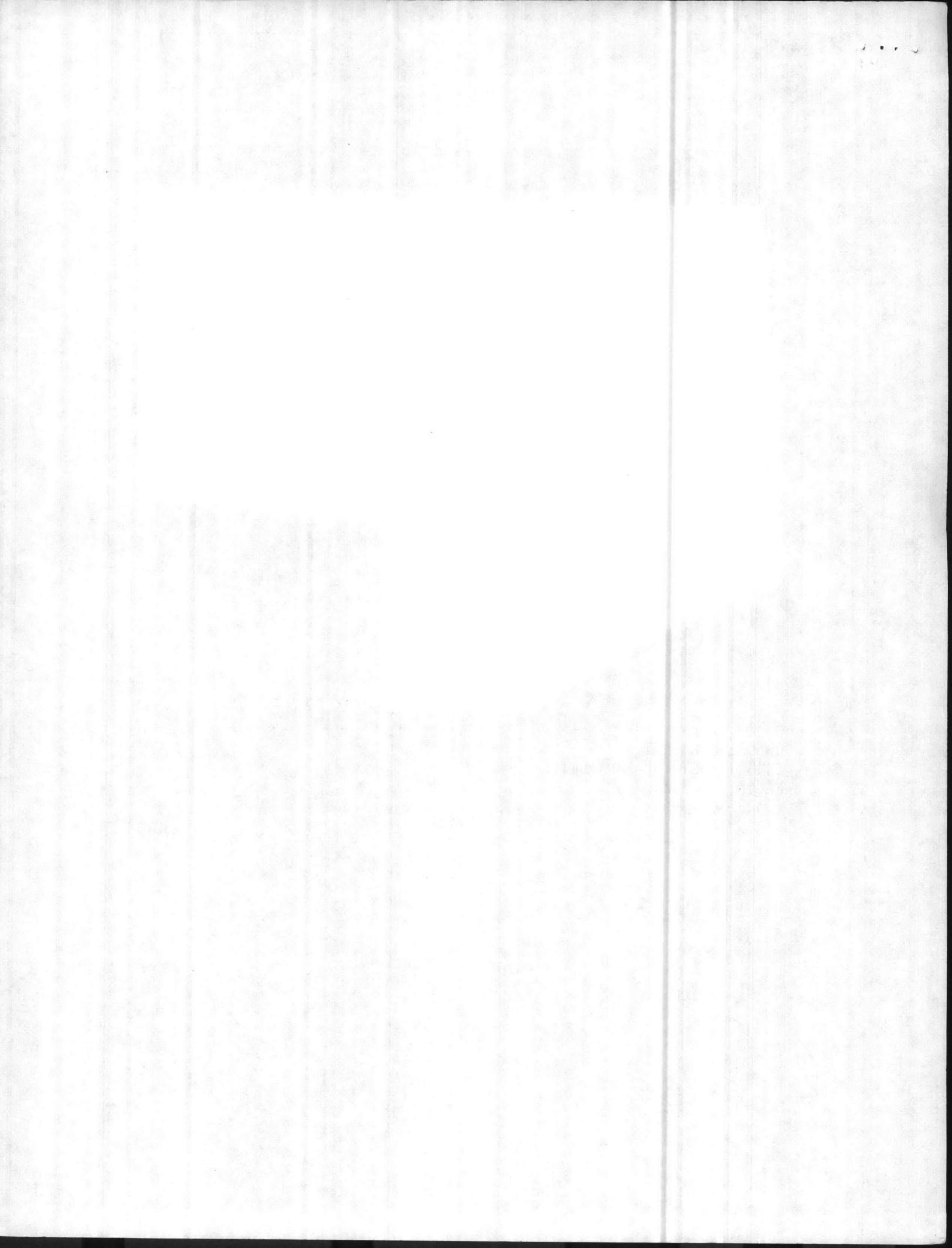
### CLASSROOM SEATING CHAIR

Lending support to any seating situation, Krueger's 7000 Series combines contemporary styling with durable, carefree dependability. Fiberglass shells are posture-shaped for seating comfort and feature a more erect backrest pitch which discourages "slouch" sitting. Backrest is "textured" to further enhance the design. Stock No. 468968 Model 7600 BR Tap-Fixed Tablet Arm, Brushed Chrome Legs.....\$82



7600BR

BRODHEAD-GARRETT  
2448 INDUSTRIAL PARK DRIVE  
MACON, GA 31208  
(912) 781-8952

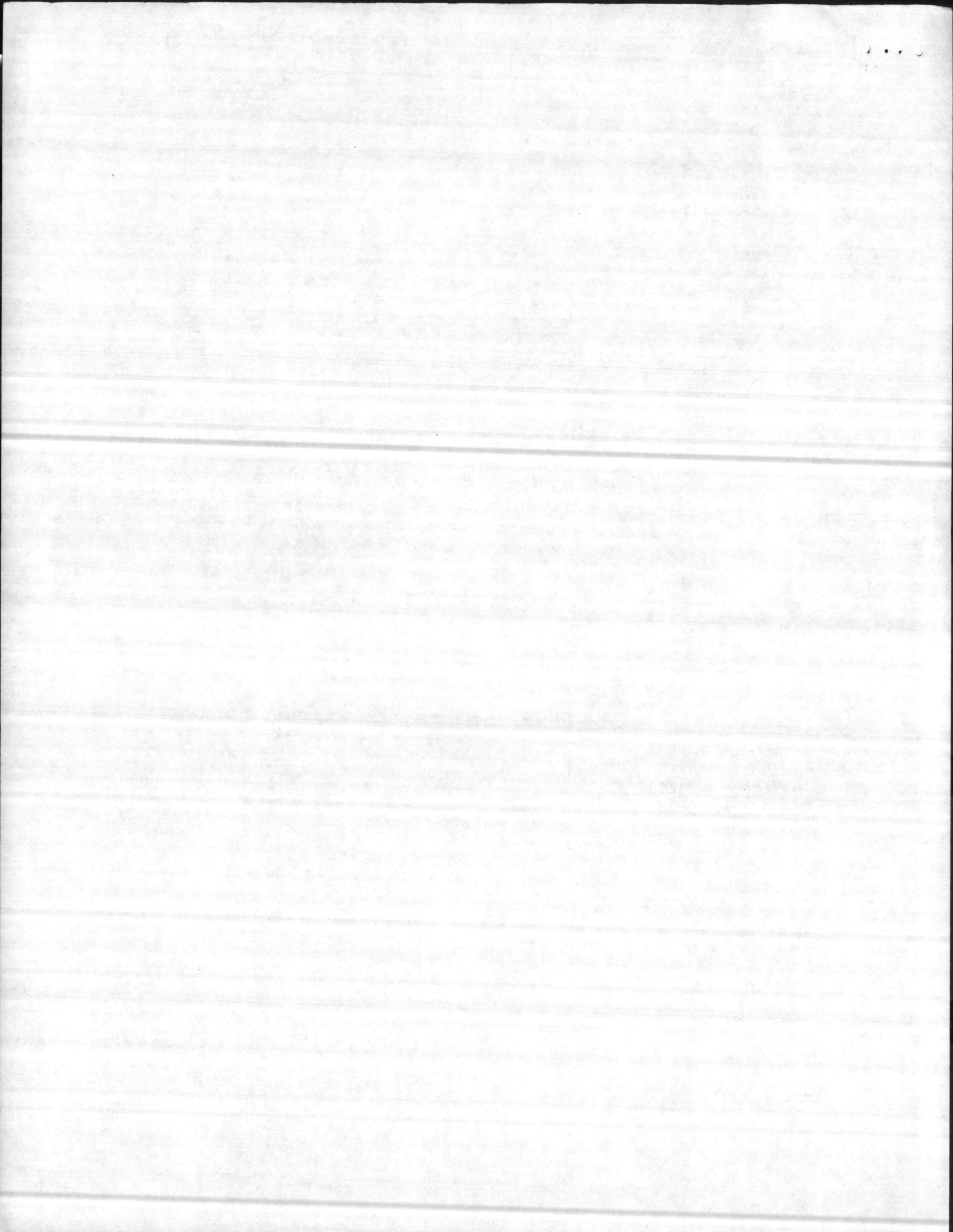


P-678

BRODHEAD-GARRETT  
2448 INDUSTRIAL PARK DRIVE  
MACON, GA 31208  
(912) 781-8952

1

5.







1/13/86

REQUEST FOR ENVIRONMENTAL IMPACT REVIEW; FORMAT AND PROCEDURES FOR SUBMISSION OF

1. Action Sponsor: Commanding General, Marine Corps Base, Camp Lejeune

2. Name, Address, Phone Number of Point of Contact: AC/S, Facilities, MCB, CamLej  
Attn: Mr. Gene Jones, Chief, Planning Branch, Public Works Div., Ext. 1833

3. Title and Brief Description of Proposed Action (state purpose, when proposed action is to occur, and any proposed environmental protection measure):

COMBAT VEHICLE MAINTENANCE SHOP (P-678)

I. PROJECT DESCRIPTION

Construct three maintenance shops of reinforced concrete on pile foundations, floors and built-up roofs, located between the 5th Battalion areas, overhead doors in areas, system telephones, and telephone conservation and pollution control project.

*two maintenance facilities*

highways of reinforced masonry walls, concrete and a connecting road between the 2d, and 3rd Battalion areas, and alarm system installation, energy conservation features are included in project.

II. PROJECT PURPOSE

This project will provide three adequate combat vehicle maintenance/ordnance shops for the 10th Marine Regiment.

III. SITE SELECTION

The environmental impact of location of the project has been documented in the current Base Master Plan. These three buildings will be sited in the Division Shop area (see Enclosure (1)). The preferred site has been reviewed with Base Environmental Personnel. No significant environmental impact or loss of natural resources were identified with this proposed site.

IV. CONCLUSION

Based on the information provided above and in the Base Master Plan, this project will not have significant adverse environmental impact on the environment. The said facility is needed due to personnel having to continue to perform maintenance in substandard makeshift facilities resulting in time consuming and inefficient operations with loss of work time and wasted energy.

4. Location: Attach a Camp Lejeune Special Map (or equivalent quality map) showing location of proposed action/project site(s).

5. Potential Environmental Impact/Considerations: (See Note 1)

a. Air Quality: Will there be any open burning associated with the project/action? No Will there be any new boilers, incinerators or fuel storage tanks (larger than 1,000 gallons) provided? Yes Will there be any paint booths, solvent vats, degreasers or other vapor-producing industrial processes involved? Yes Will the project involve the use or disposal of asbestos? No Will project cause dust problems? No

b. Land Quality: Will the action require use of significant amount of earthen fill material? Unknown Will there be an increase in level of soil disturbance/damage to vegetation? Unknown Will there be one acre or more of land cleared/disturbed? Yes

c. Groundwater Quality: Does the project involve use of herbicides, insecticides or other pesticides in significant amounts? No Does the project involve installation/use of septic tanks, or any other on-site disposal of sanitary waste? No Will there be any wells dug or any excavations deeper than twenty feet? No Will any toxic or hazardous material/waste requiring disposal be used or generated by the project? Yes Will there be a net increase of solid waste caused by implementing the project/action? No Will the project or action be carried out within 200 feet of a drinking water supply well? No

d. Surface Water Quality: Is the project located on or in a water body or adjacent 100-year flood plain? Unknown Will the project involve construction of drainage ditches/underground drains for purposes of lowering water table? No Will all wastewater be connected to sanitary sewer? Yes Will there be an increase in erosion/siltation from soil disturbing activity? Unknown Will petroleum oil and lubricants be routinely stored or used at the site? Yes Will the project increase rates of surface/storm water run-off? Yes

e. Natural Resources: Will there be a loss of forest land? No Will public access for hunting, boating, fishing, etc., be restricted? Yes Is there a change in land use from what is presently shown in Base Master Plan? No Will removal of existing vegetation be required? No Are there any known effects on any endangered species? No Does the project involve the purchase or sale of any real estate? No

f. Socio-Economic Considerations: Will the project cause an increase/decrease in on or off-base military population? No Will there be any increased demand on a local or state government to provide services? No Will there be any changes to traffic flow and patterns on or off-base? No Will any noise, traffic, dust, etc., be generated which may affect off-base persons or property? No Is there any known controversy associated with the type of project or action proposed? No Are there any historical or archaeological sites affected by project/action? No

NOTE 1. Answer either "yes", "no" or "unknown". Answers should be based on information available to the action sponsor at time of submission to the Base Environmental Impact Review Board. Do not delay the submission of this request awaiting additional information. Many environmental considerations need to be addressed in early planning stages. If additional information becomes available after submission, it should be forwarded to the EIRB.

## REQUEST FOR ENVIRONMENTAL IMPACT REVIEW; FORMAT AND PROCEDURES FOR SUBMISSION OF

1. Action Sponsor: Commanding General, Marine Corps Base, Camp Lejeune
2. Name, Address, Phone Number of Point of Contact: AC/S, Facilities, MCB, CamLej  
Attn: Mr. Gene Jones, Chief, Planning Branch, Public Works Div., Ext. 1833
3. Title and Brief Description of Proposed Action (state purpose, when proposed action is to occur, and any proposed environmental protection measure):

## COMBAT VEHICLE MAINTENANCE SHOP (P-678)

I. PROJECT DESCRIPTION

Construct three maintenance facilities with highbays of reinforced concrete on pile foundation with masonry walls, concrete floors and built-up roofing with insulation and a connecting road between the 5th Battalion area and the 1st, 2d, and 3rd Battalion areas, overhead doors in bay areas, fire protection, and alarm system telephones, and telephone equipment installation, energy conservation and pollution abatement features are included in project.

II. PROJECT PURPOSE

This project will provide three adequate combat vehicle maintenance/ordnance shops for the 10th Marine Regiment.

III. SITE SELECTION

The environmental impact of location of the project has been documented in the current Base Master Plan. These three buildings will be sited in the Division Shop area (see Enclosure (1)). The preferred site has been reviewed with Base Environmental Personnel. No significant environmental impact or loss of natural resources were identified with this proposed site.

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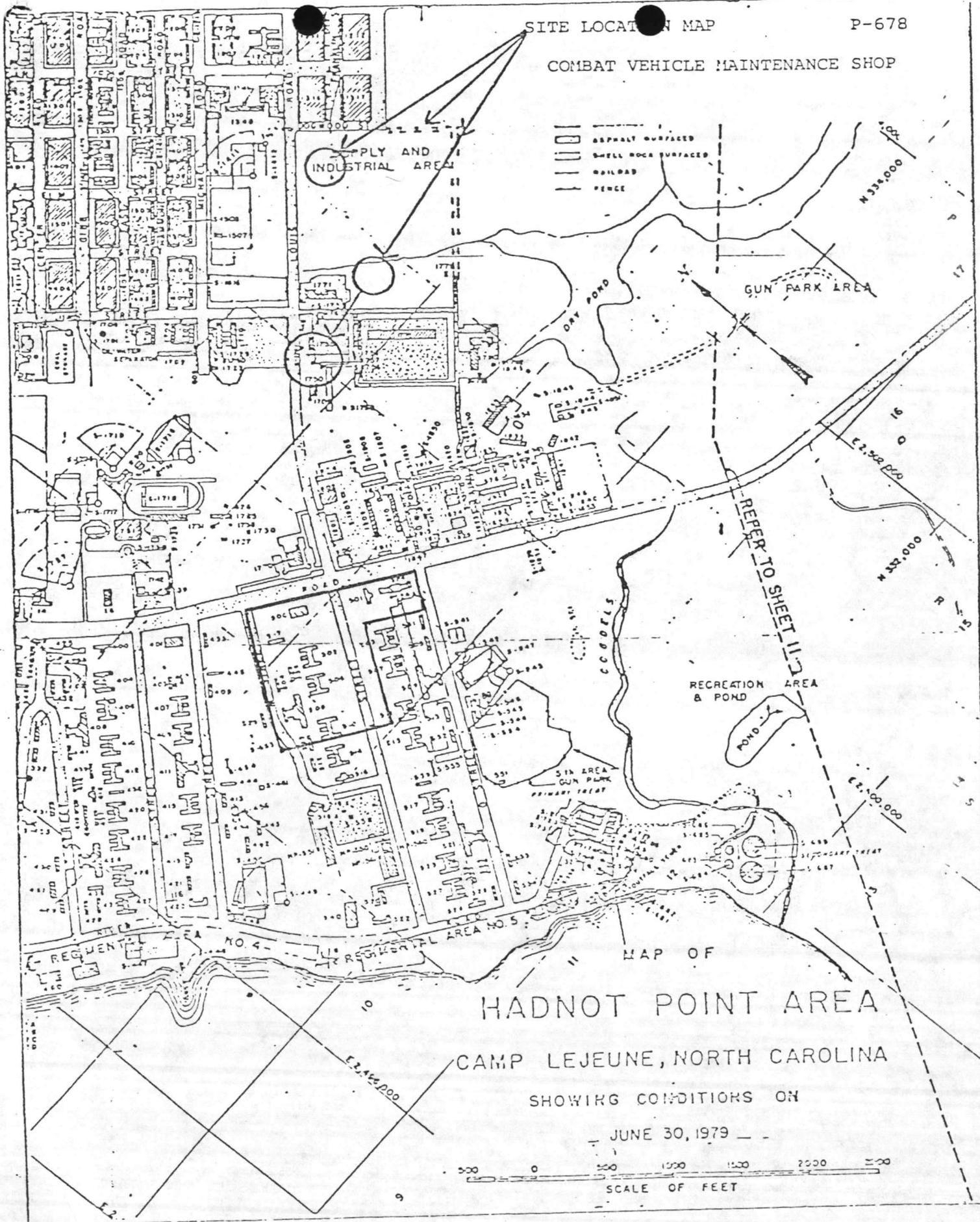
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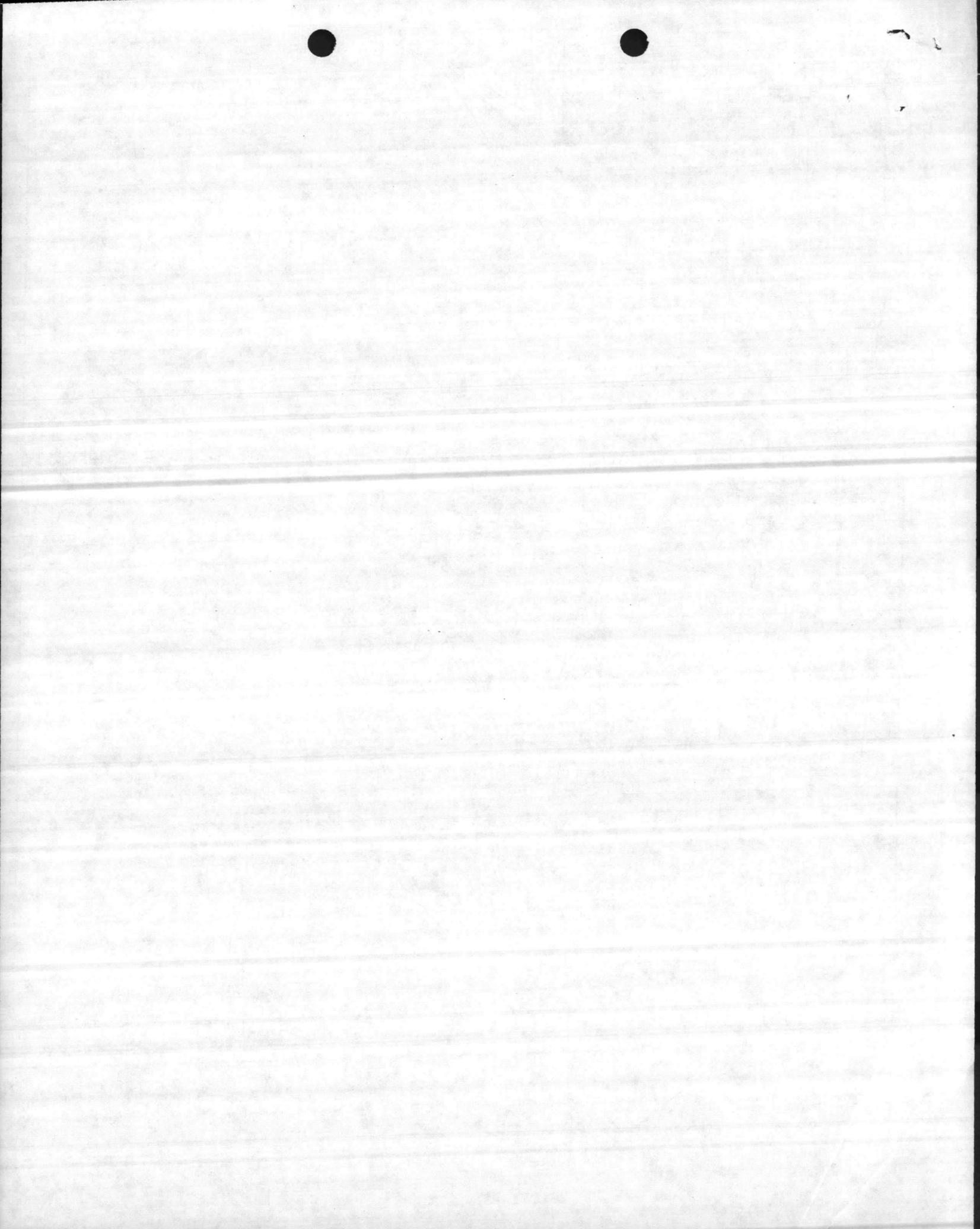
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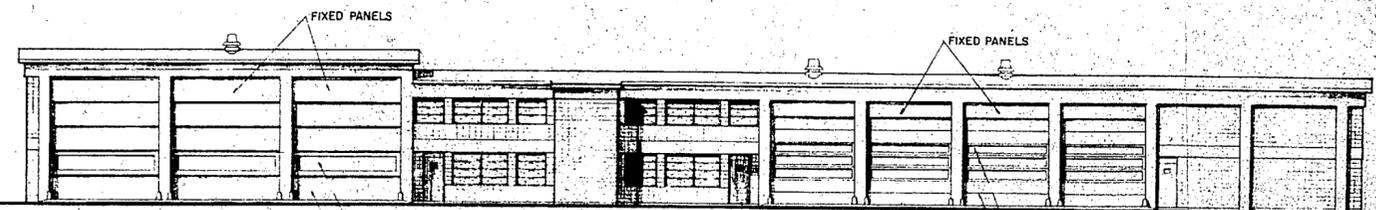
ENCLOSURE (1)

COMBAT VEHICLE MAINTENANCE SHOP

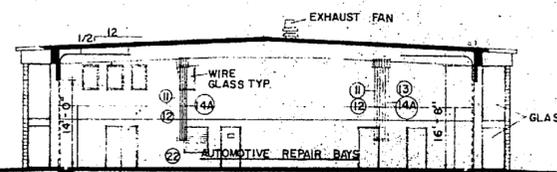




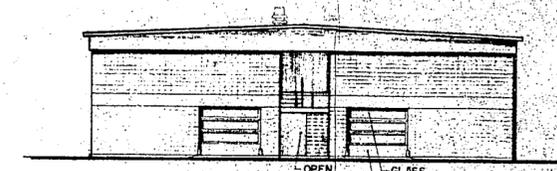
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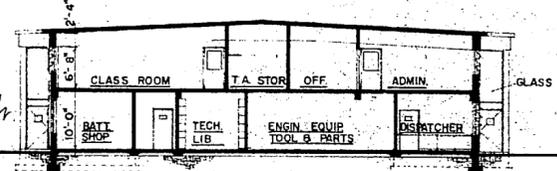
FRONT ELEVATION  
SCALE: 3/32" = 1'-0"



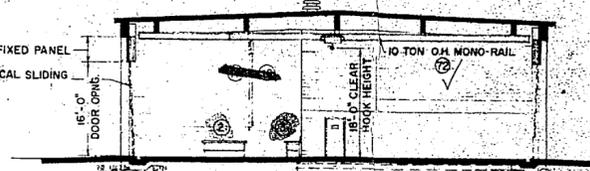
SECTION A-A  
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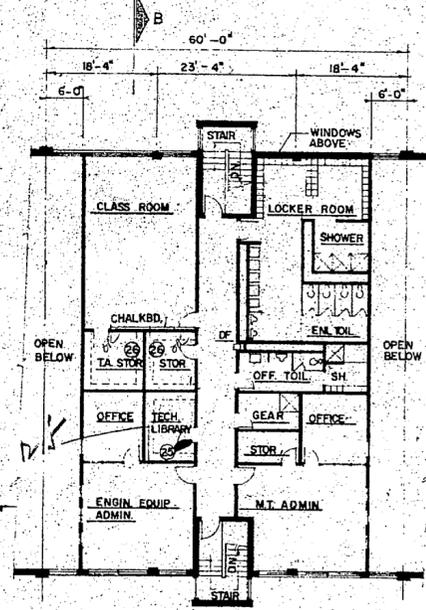
RIGHT SIDE ELEVATION  
SCALE: 3/32" = 1'-0"



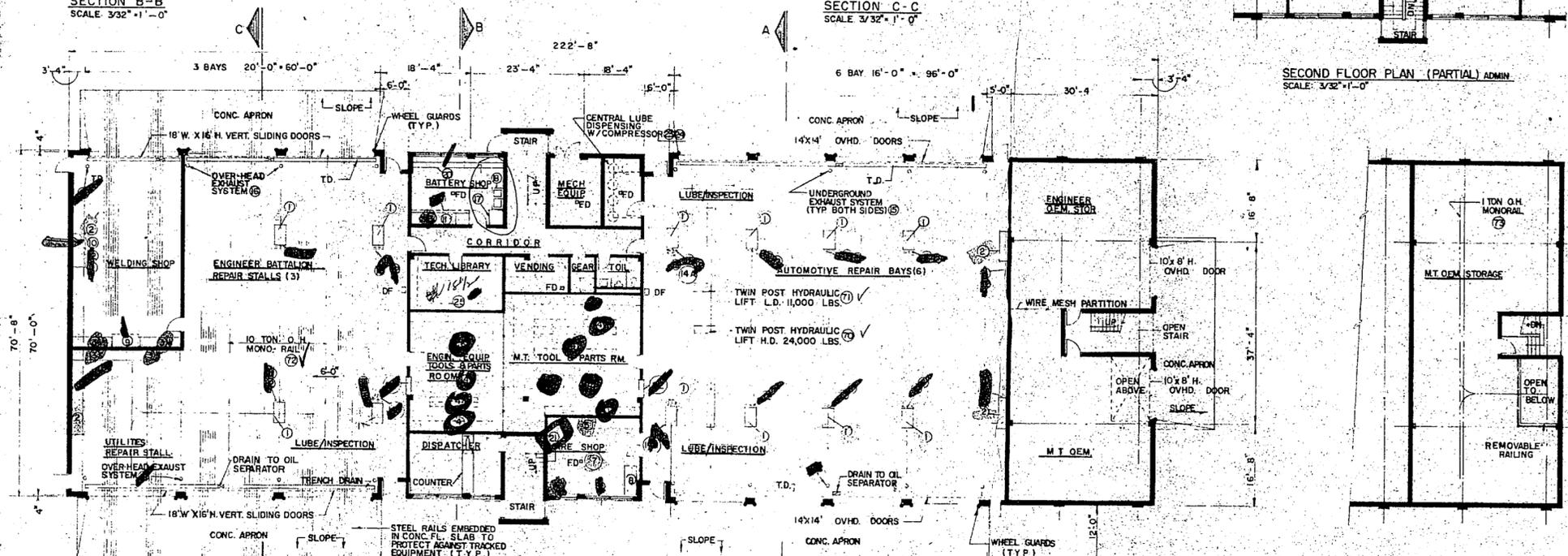
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SECTION C-C  
SCALE: 3/32" = 1'-0"

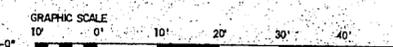


SECOND FLOOR PLAN (PARTIAL) ADMIN  
SCALE: 3/32" = 1'-0"



FIRST FLOOR PLAN  
SCALE: 3/32" = 1'-0"

SECOND FLOOR PLAN (PARTIAL) OVM. STOR.  
SCALE: 3/32" = 1'-0"



USE DIRECTED AT MARINE CORPS ACTIVITIES  
W. C. C. King

FOR EQUIPMENT SCHEDULE SEE NAVFAC DRAWING NO. 1294451

PLUMBING REQUIREMENTS

COLD WATER: (PROBABLE MAXIMUM FLOW RATE IN GPM)	100
HOT WATER: STORAGE IN GALLONS (CONVERTORS)	135
HOT WATER RECOVERY (GPH)	100

NOTE: ABOVE FLOW RATE DOES NOT INCLUDE REQUIREMENTS FOR FIRE PROTECTION (AND AIR CONDITIONING.)

MECHANICAL REQUIREMENTS

HEATING: (IN MBTU/HR):	70°F
INSIDE DESIGN TEMPERATURE	-5°F
OUTSIDE DESIGN TEMPERATURE	+5°F +15°F +25°F
	.812 .757 .678 .562

AIR CONDITIONING: (TONS OF REFRIGERATION): (MAX)

INSIDE DESIGN TEMPERATURE	74-78° FDB	50% RH
OUTSIDE DESIGN TEMPERATURE	95° FDB	78 F WB

MECHANICAL VENTILATION SHALL BE PROVIDED FOR BATTERY SHOPS. MAXIMUM AIR CONDITIONING REQUIREMENT IS APPROXIMATE. ACTUAL SPACES TO BE AIR CONDITIONED AND REQUIREMENTS SHALL BE BASED ON DOD CONSTRUCTION CRITERIA MANUAL NO. 4270.1-M.

ELECTRICAL REQUIREMENTS

LIGHTS:		
CONNECTED LOAD (KW)	40	
ESTIMATED DEMAND (KW)	40	

POWER:	(WITH AC)	WITHOUT AC
CONNECTED LOAD (KW)	115	105
ESTIMATED DEMAND (KW)	85	79

TOTAL:		
CONNECTED LOAD (KW)	153	135
ESTIMATED DEMAND (KW)	125	109

MAXIMUM AIR CONDITIONING REQUIREMENT IS APPROXIMATE. ACTUAL SPACES TO BE AIR CONDITIONED & REQUIREMENTS SHALL BE BASED ON DOD CONSTRUCTION CRITERIA MANUAL NO. 4270.1-M.

AREA	
GROSS AREA WITHOUT MECH. EQUIP. RM. (SQ. FT.)	19,840
MECH. EQUIP. ROOM (SQ. FT.)	160
GROSS AREA-TOTAL (SQ. FT.)	21,000

GENERAL NOTES

UTILITIES REQUIREMENTS INDICATED ARE FOR ESTIMATING PURPOSES ONLY.  
AUTOMATIC SPRINKLER AND FIRE PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH CURRENT DOD 4270.1-M CONSTRUCTION CRITERIA MANUAL AND NAVFAC DM-8.  
MECHANICAL EQUIPMENT ROOM SIZES SHALL BE VARIABLE DEPENDING ON CLIMATIC LOCATIONS AND EQUIPMENT REQUIREMENTS.  
ADDITIONAL REQUIRED FACILITIES INCLUDE:  
7' x 20' x 40' CONC. WASH APRONS WITH WATER & STEAM OUTLETS ADJACENT TO MAINT. FACILITY.  
PROVIDE OUTSIDE LUBE/INSPECTION PIT FOR CRANE & HEAVY TRACKED ENGINEER EQUIP. WITH INSPECTION RAMP 60' FT LONG x 120 SQ FT LUBE SHED.  
PROVIDE 200 SQ. FT. WELDING STOCK COVERED STORAGE ADJACENT TO MAINT. FACILITY.  
MARINE CORPS ACTIVITIES SHALL FOLLOW THE ARRANGEMENT AND FUNCTIONAL LAYOUT INDICATED IN INITIATION OF CONSTRUCTION REQUIREMENTS UNLESS PRIOR AUTHORIZATION FOR CHANGE IS OBTAINED FROM THE COMMANDANT OF THE MARINE CORPS. ARCHITECTURAL TREATMENT AND MATERIAL MAY VARY WHEN NEEDED TO ACHIEVE COMPATABILITY WITH LOCAL CONSTRUCTION AND EFFECTIVE USE OF MATERIALS.

LITTLE, BISSETT, CARLISLE & WOLFF  
ARCHITECTS / ENGINEERS / PLANNERS  
1100 W. HANCOCK ST. ORANGE, FLORIDA 32067  
TEL: 407/261-1111 FAX: 407/261-1112

DESIGN: W.C. DRAWN: W.C. DATE: 1/23/70  
CHECKED: W.C. DATE: 1/23/70  
SUBMITTED BY: W.C. DATE: 1/23/70  
APPROVED BY: W.C. DATE: 1/23/70  
FOR: NAVFAC

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
DEFINITIVE DRAWING  
ORGANIZATIONAL MAINTENANCE SHOP (COMBAT)  
ENGINEER BATTALION  
U.S.M.C.

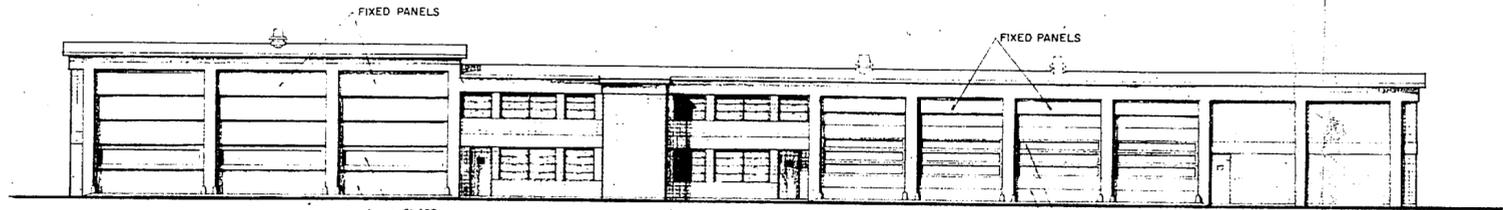
NAVY T/O ML 1376  
WASHINGTON, D.C.

APPROVED: [Signature] DATE: 1/23/70  
OFFICER IN CHARGE: [Signature] DATE: 1/23/70  
FOR: COMNAVSTA/NAVFAC

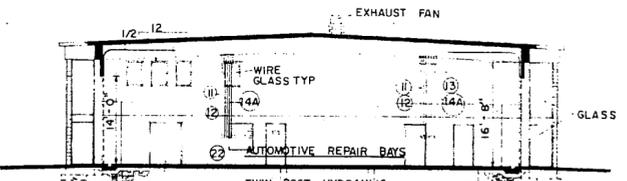
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NAVFAC DRAWING NO. (293371)

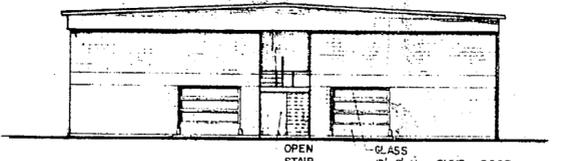




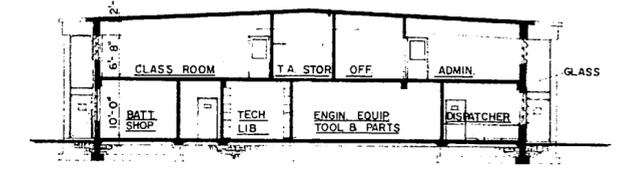
FRONT ELEVATION  
SCALE: 3/32" = 1'-0"



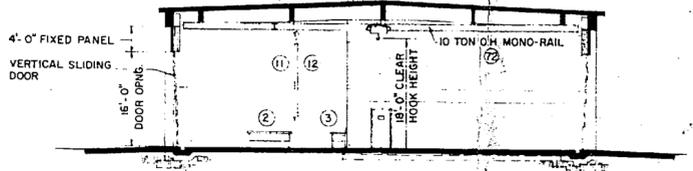
SECTION A-A  
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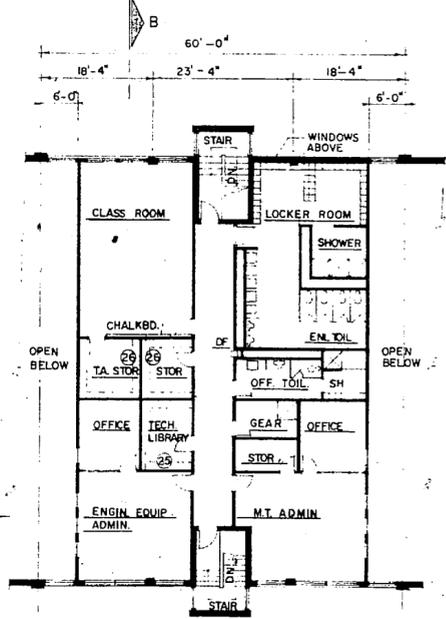
RIGHT SIDE ELEVATION  
SCALE: 3/32" = 1'-0"



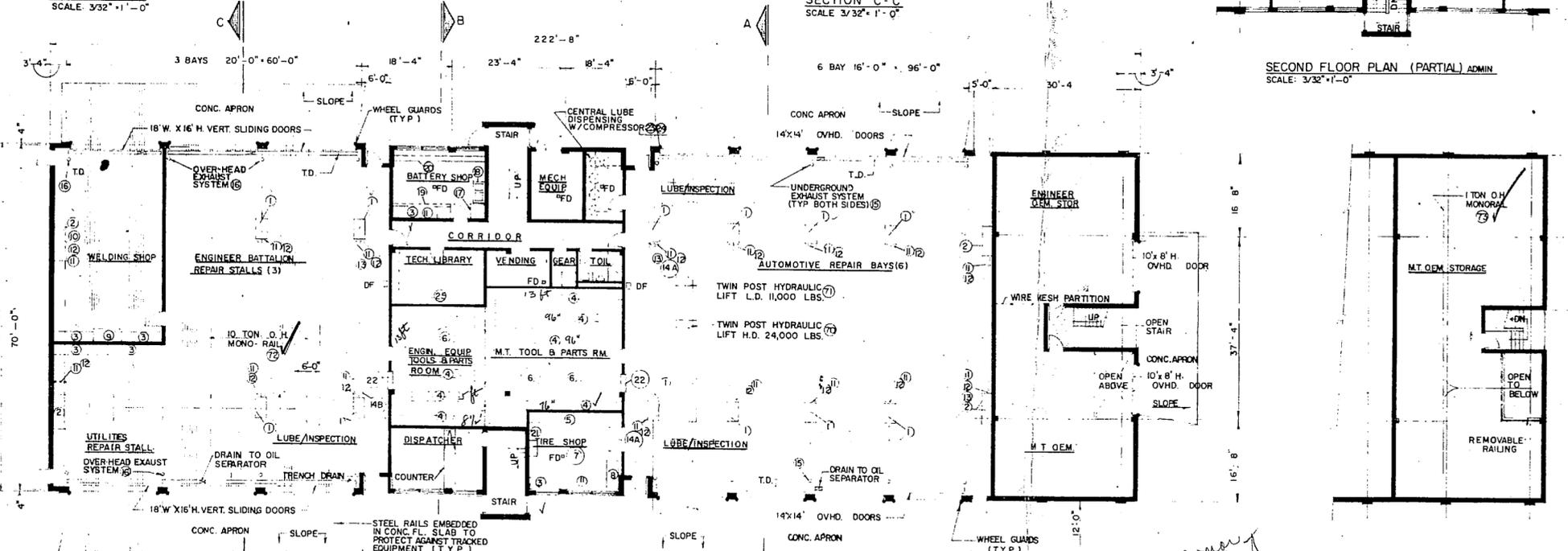
SECTION B-B  
SCALE: 3/32" = 1'-0"



SECTION C-C  
SCALE: 3/32" = 1'-0"



SECOND FLOOR PLAN (PARTIAL) ADMIN  
SCALE: 3/32" = 1'-0"



FIRST FLOOR PLAN  
SCALE: 3/32" = 1'-0"

SECOND FLOOR PLAN (PARTIAL) OVM STOR  
SCALE: 3/32" = 1'-0"

PLUMBING REQUIREMENTS

COLD WATER: (PROBABLE MAXIMUM FLOW RATE IN GPM) 100

HOT WATER: STORAGE IN GALLONS (CONVERTORS) 135  
HOT WATER RECOVERY (GPH) 100

NOTE: ABOVE FLOW RATE DOES NOT INCLUDE REQUIREMENTS FOR FIRE PROTECTION (AND AIR CONDITIONING)

MECHANICAL REQUIREMENTS

HEATING: (IN MBTU/HR): 70°F  
INSIDE DESIGN TEMPERATURE 70°F  
OUTSIDE DESIGN TEMPERATURE -5°F +5°F +15°F +25°F  
812 757 678 562

AIR CONDITIONING: (TONS OF REFRIGERATION): (MAX) 5  
INSIDE DESIGN TEMPERATURE 74-78°F DB 50%RH  
OUTSIDE DESIGN TEMPERATURE 59°F DB 78°F WB

MECHANICAL VENTILATION SHALL BE PROVIDED FOR BATTERY SHOPS. MAXIMUM AIR CONDITIONING REQUIREMENT IS APPROXIMATE, ACTUAL SPACES TO BE AIR CONDITIONED AND REQUIREMENTS SHALL BE BASED ON DOD CONSTRUCTION CRITERIA MANUAL NO. 4270.1-M.

ELECTRICAL REQUIREMENTS

LIGHTS:  
CONNECTED LOAD (KW) 40  
ESTIMATED DEMAND (KW) 40

POWER: (WITH AC) (MAX CAP) WITHOUT AC  
CONNECTED LOAD (KW) 113 105  
ESTIMATED DEMAND (KW) 85 79

TOTAL:  
CONNECTED LOAD (KW) 153 135  
ESTIMATED DEMAND (KW) 125 109  
MAXIMUM AIR CONDITIONING REQUIREMENT IS APPROXIMATE, ACTUAL SPACES TO BE AIR CONDITIONED & REQUIREMENTS SHALL BE BASED ON DOD CONSTRUCTION CRITERIA MANUAL NO. 4270.1-M.

AREA  
GROSS AREA WITHOUT MECH. EQUIP. RM. (SQ. FT.) 9,840  
MECH. EQUIP. ROOM (SQ. FT.) 160  
GROSS AREA-TOTAL (SQ. FT.) 10,000

GENERAL NOTES

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DESIGN: BISSITT, CARLISLE & WOLFF  
ENGINEER: CARLISLE, WOLFF & BISSITT  
DRAWN BY: CARLISLE, WOLFF & BISSITT  
CHECKED BY: CARLISLE, WOLFF & BISSITT  
DATE: 12/1/57

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND

DEFINITIVE DRAWING  
ORGANIZATIONAL MAINTENANCE SHOP (COMBAT)  
ENGINEER BATTALION U.S.M.C.

NAVAC DRAWING NO. 1293371

APPROVED: [Signature] DATE: 12/1/57  
OFFICER IN CHARGE: [Signature]  
SIZE: F CODE IDENT. NO.: 80091  
SCALE AS NOTED: 3/32" = 1'-0"

*Vel Eng Support to the main shop 25,000 SF Tab & Hqs Bldg*

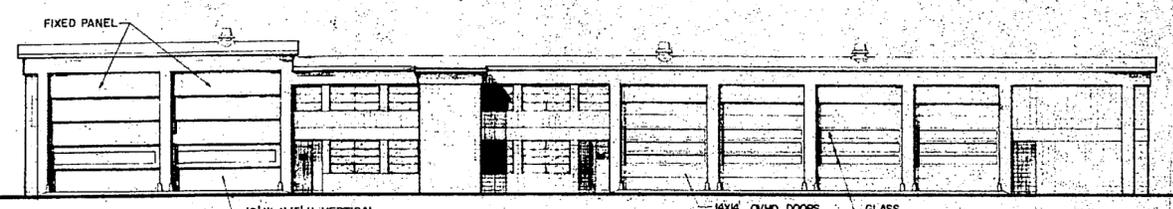
*13 135 812 812 612 612 612 612*

*USE DIRECTED AT MARINE CORPS ACTIVITIES*

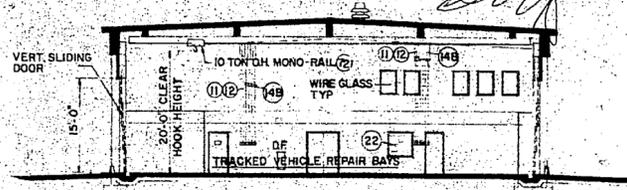
*W. C. Chip*



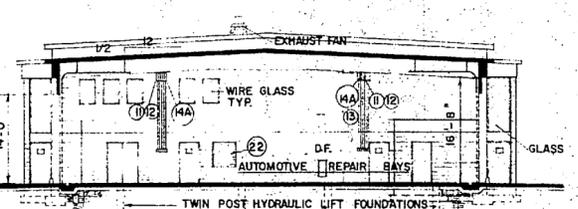
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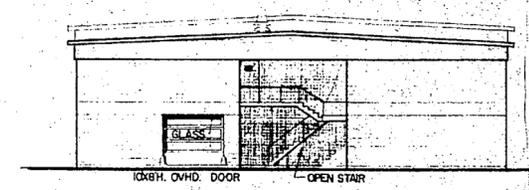
FRONT ELEVATION  
SCALE: 3/32" = 1'-0"



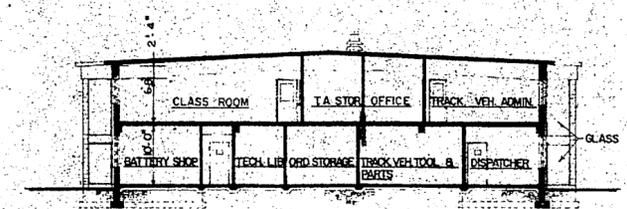
SECTION C-C  
SCALE: 3/32" = 1'-0"



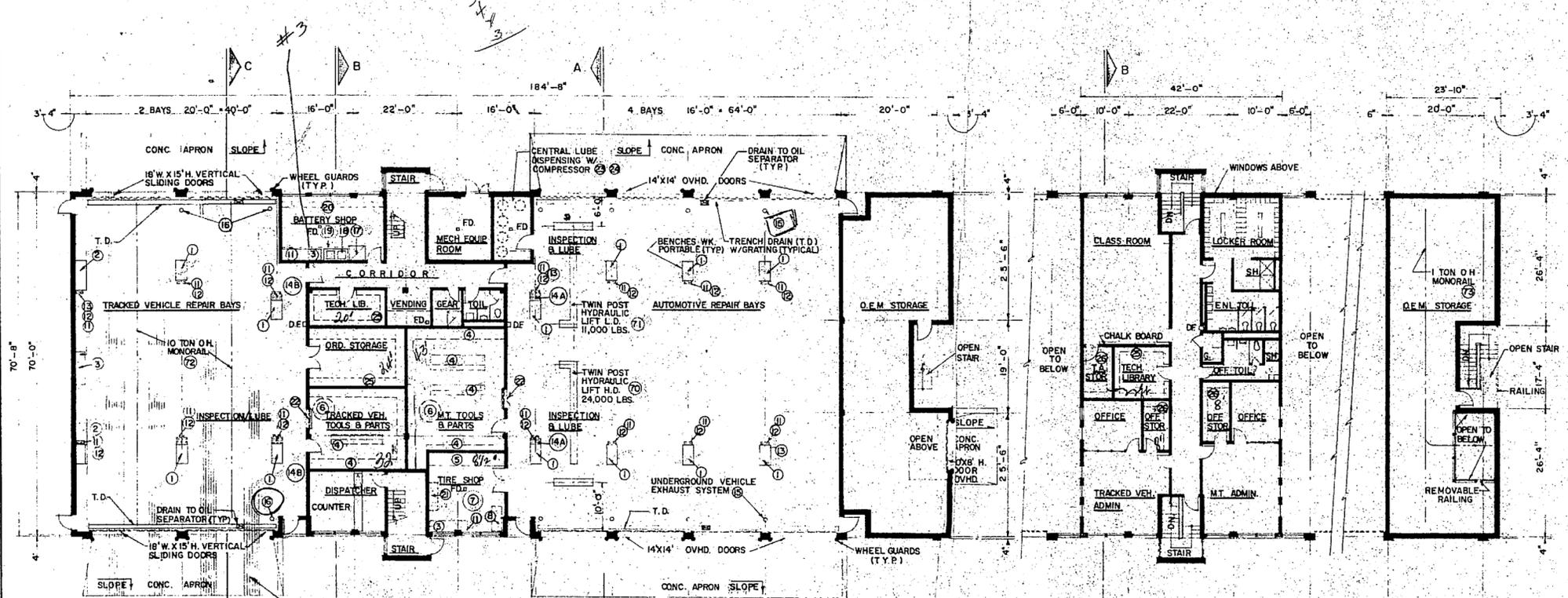
SECTION A-A  
SCALE: 3/32" = 1'-0"



RIGHT SIDE ELEVATION  
SCALE: 3/32" = 1'-0"



SECTION B-B  
SCALE: 3/32" = 1'-0"



FIRST FLOOR PLAN  
SCALE: 3/32" = 1'-0"

SECOND FLOOR PLAN (PARTIAL)  
SCALE: 3/32" = 1'-0"

GRAPHIC SCALE  
3/32" = 1'-0"

PLUMBING REQUIREMENTS

COLD WATER: (PROBABLE MAXIMUM FLOW RATE IN GPM)	100
HOT WATER: STORAGE IN GALLONS (CONVERTORS)	110'
HOT WATER RECOVERY (GPH)	85
NOTE: ABOVE FLOW RATE DOES NOT INCLUDE REQUIREMENTS FOR FIRE PROTECTION (AND AIR CONDITIONING).	

MECHANICAL REQUIREMENTS

HEATING: (IN MBTU/HR):	70°F
INSIDE DESIGN TEMPERATURE	-5° +5°F +15° +25°F
OUTSIDE DESIGN TEMPERATURE	715 680 587 506
AIR CONDITIONING: (TONS OF REFRIGERATION): (MAX.)	
INSIDE DESIGN TEMPERATURE	74-78° FDB 50% RH
OUTSIDE DESIGN TEMPERATURE	55° FDB 78° FWB
	5

MECHANICAL VENTILATION SHALL BE PROVIDED FOR BATTERY SHOPS.  
MAXIMUM AIR CONDITIONING REQUIREMENT IS APPROXIMATE. ACTUAL SPACES TO BE AIR CONDITIONED AND REQUIREMENTS SHALL BE BASED ON DOD CONSTRUCTION CRITERIA MANUAL NO. 4270.1-M.

ELECTRICAL REQUIREMENTS

LIGHTS:		
CONNECTED LOAD (KW)	33	
ESTIMATED DEMAND (KW)	33	
POWER:	WITH AC (MAX CAP)	WITHOUT AC
CONNECTED LOAD (KW)	53	44
ESTIMATED DEMAND (KW)	40	33
TOTAL:		
CONNECTED LOAD (KW)	86	69
ESTIMATED DEMAND (KW)	73	58
MAXIMUM AIR CONDITIONING REQUIREMENT IS APPROXIMATE. ACTUAL SPACES TO BE AIR CONDITIONED & REQUIREMENTS SHALL BE BASED ON DOD CONSTRUCTION CRITERIA MANUAL NO. 4270.1-M.		

AREA	
GROSS AREA WITHOUT MECH. EQUIP. RM. (SQ. FT.)	17,480
MECH. EQUIP. ROOM (SQ. FT.)	16.0
GROSS AREA-TOTAL (SQ. FT.)	17,640

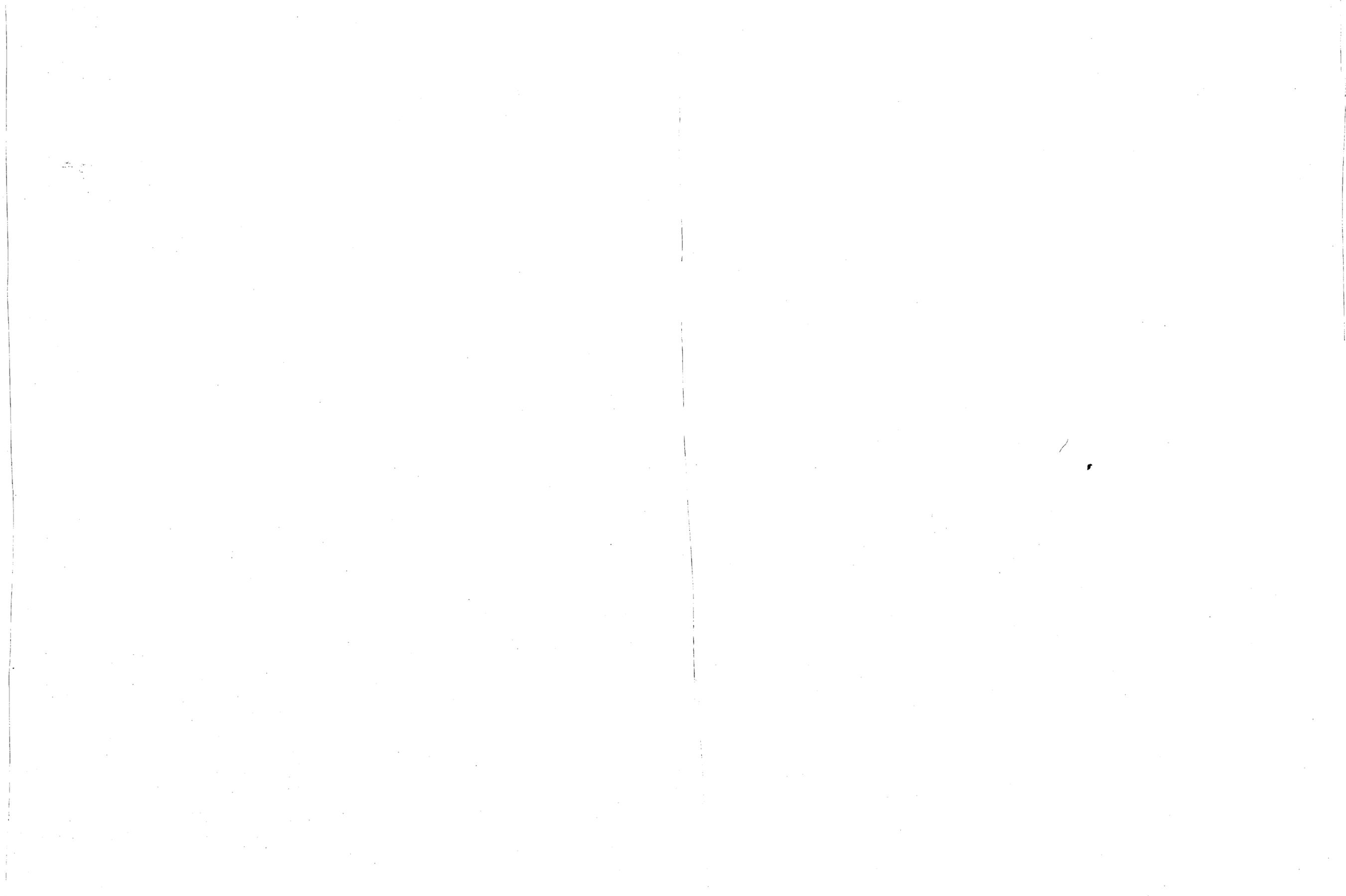
GENERAL NOTES

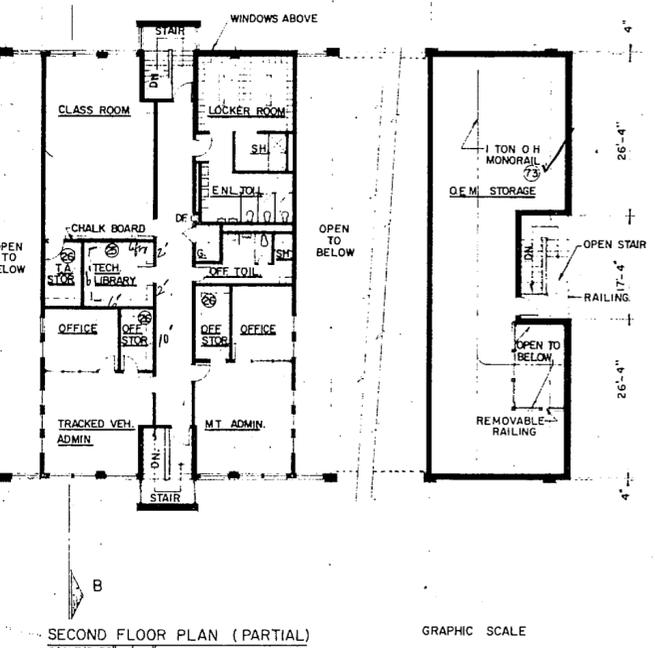
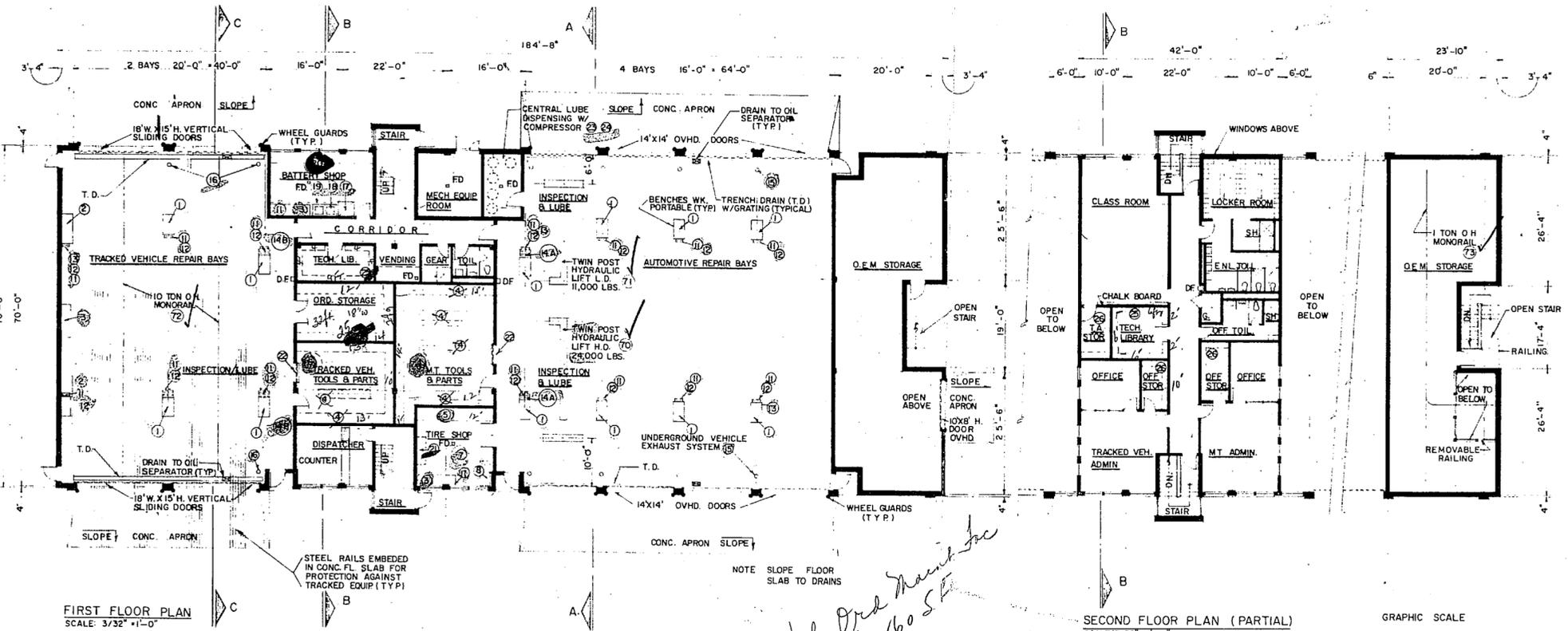
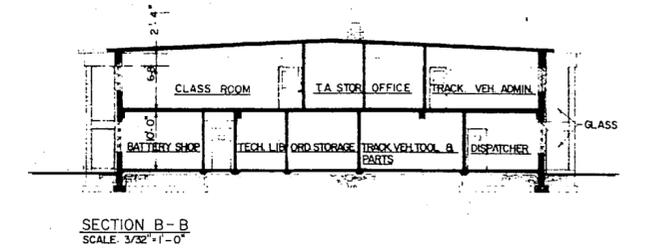
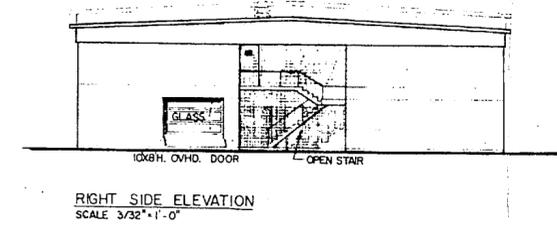
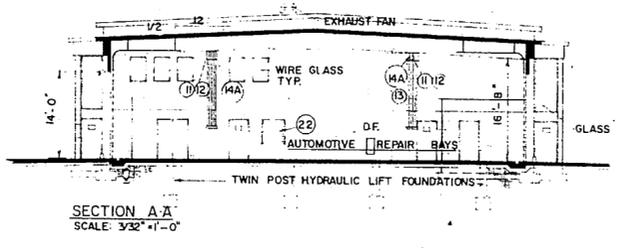
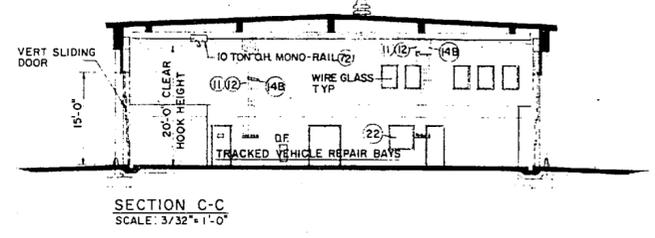
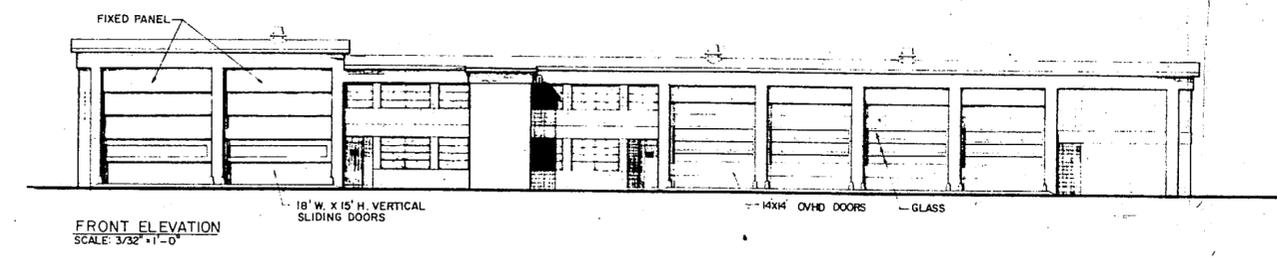
UTILITIES REQUIREMENTS INDICATED ARE FOR ESTIMATING PURPOSES ONLY.  
AUTOMATIC SPRINKLER AND FIRE PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH CURRENT DOD 4270.1-M CONSTRUCTION CRITERIA MANUAL AND NAVFAC DM-8.  
MECHANICAL EQUIPMENT ROOM SIZES SHALL BE VARIABLE DEPENDING ON CLIMATIC LOCATIONS AND EQUIPMENT REQUIREMENTS.  
ADDITIONAL REQUIRED FACILITIES INCLUDE:  
7' - 20' x 40' CONC. WASH APRONS WITH WATER & STEAM OUTLETS LOCATED ADJACENT TO MAINT. FACILITY.  
MARINE CORPS ACTIVITIES SHALL FOLLOW THE ARRANGEMENT AND FUNCTIONAL LAYOUT INDICATED IN INITIATION OF CONSTRUCTION REQUIREMENTS UNLESS PRIOR AUTHORIZATION FOR CHANGE IS OBTAINED FROM THE COMMANDANT OF THE MARINE CORPS. ARCHITECTURAL TREATMENT AND MATERIAL MAY VARY WHEN NEEDED TO ACHIEVE COMPATABILITY WITH LOCAL CONSTRUCTION AND EFFECTIVE USE OF MATERIALS.

NAVY FACILITIES ENGINEERING COMMAND  
DEFINITIVE DRAWING  
ORGANIZATIONAL MAINTENANCE SHOP (COMBAT)  
ARTILLERY GEN. SUPPORT BATTALION,  
HEADQUARTERS BATTERY  
U.S.M.C.

APPROVED: [Signature] DATE: 9/23/70  
SCALE AS NOTED

NAVY FACILITIES ENGINEERING COMMAND  
DRAWING NO. 1293372





PLUMBING REQUIREMENTS

COLD WATER: (PROBABLE MAXIMUM FLOW RATE IN GPM) — 0

HOT WATER:  
STORAGE IN GALLONS (CONVERTORS) — 0  
HOT WATER RECOVERY (GPH) — 5

NOTE: ABOVE FLOW RATE DOES NOT INCLUDE REQUIREMENTS OR FIRE PROTECTION (AND AIR CONDITIONING.)

MECHANICAL REQUIREMENTS

HEATING: (IN MBTU/HR):

INSIDE DESIGN TEMPERATURE	70°F		
OUTSIDE DESIGN TEMPERATURE	-5°	+5°F	+10°
	715	680	587
			508

AIR CONDITIONING: (TONS OF REFRIGERATION): (MAX.)

INSIDE DESIGN TEMPERATURE	74-78°F DB	50° RH
OUTSIDE DESIGN TEMPERATURE	95°F DB	78° WB
		5

MECHANICAL VENTILATION SHALL BE PROVIDED FOR BATTERY SHOPS.  
MAXIMUM AIR CONDITIONING REQUIREMENT IS APPROXIMATE, ACTUAL SPACES TO BE AIR CONDITIONED AND REQUIREMENTS SHALL BE BASED ON DOD CONSTRUCTION CRITERIA MANUAL NO. 4270.1-1-M.

ELECTRICAL REQUIREMENTS

LIGHTS:

CONNECTED LOAD (KW)	33
ESTIMATED DEMAND (KW)	33

POWER:

	WITH AC (MAXCAP)	WITHOUT AC
CONNECTED LOAD (KW)	53	44
ESTIMATED DEMAND (KW)	40	33

TOTAL:

CONNECTED LOAD (KW)	86	69
ESTIMATED DEMAND (KW)	73	58

MAXIMUM AIR CONDITIONING REQUIREMENT IS APPROXIMATE, ACTUAL SPACES TO BE AIR CONDITIONED & REQUIREMENTS SHALL BE BASED ON DOD CONSTRUCTION CRITERIA MANUAL NO. 4270.1-M

AREA

GROSS AREA WITHOUT MECH. EQUIP. RM. (SQ. FT.)	17,480
MECH. EQUIP. ROOM (SQ. FT.)	160
GROSS AREA-TOTAL (SQ. FT.)	17,640

GENERAL NOTES

UTILITIES REQUIREMENTS INDICATED ARE FOR ESTIMATING PURPOSES ONLY.  
AUTOMATIC SPRINKLER AND FIRE PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH CURRENT DOD 4270-1 CONSTRUCTION CRITERIA MANUAL AND NAVFAC DM-8.  
MECHANICAL EQUIPMENT ROOM SIZES SHALL BE VARIABLE DEPENDENT ON CLIMATIC LOCATIONS AND EQUIPMENT REQUIREMENTS.  
ADDITIONAL REQUIRED FACILITIES INCLUDE:  
7'-20" x 40" CONC. WASH APRONS WITH WATER & STEAM.  
OUTLETS LOCATED ADJACENT TO MAINT. FACILITY.  
MARINE CORPS ACTIVITIES SHALL FOLLOW THE ARRANGEMENT AND FUNCTIONAL LAYOUT INDICATED IN INITIATION OF CONSTRUCTION REQUIREMENTS UNLESS PRIOR AUTHORIZATION FOR CHANGE IS OBTAINED FROM THE COMMANDANT OF THE MARINE CORPS. ARCHITECTURAL TREATMENT AND MATERIAL MAY VARY WHEN NEEDED TO ACHIEVE COMPATIBILITY WITH LOCAL CONSTRUCTION AND EFFECTIVE USE OF MATERIALS.

DESIGNED BY: LITTLE, BISSETT, CARLISLE & WOLFE ARCHITECTS / ENGINEERS / CONSULTANTS  
DRAWN BY: [Signature]  
CHECKED BY: [Signature]  
DATE: 12/10/50  
SCALE: AS SHOWN

DEPARTMENT OF THE NAVY  
WASHINGTON, D. C.  
NAVAL FACILITIES ENGINEERING COMMAND

DEFINITIVE DRAWING  
ORGANIZATIONAL MAINTENANCE SHOP (COMBAT)  
ARTILLERY GEN. SUPPORT BATTALION,  
HEADQUARTERS BATTERY  
U.S.M.C.

APPROVED: [Signature] DATE: [Date]  
OFFICER IN CHARGE: [Signature] DATE: [Date]  
FOR COMBAT/NAVY: [Signature]

NAVFAAC DRAWING NO. 293372  
SCALE AS NOTED

*Use Ord Maint Shop  
36, 460 S.F.  
4th Floor*

USE DIRECTED AT MARINE CORPS ACTIVITIES

The next desk -

Collateral Eggs

P. 678

P 678